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# LAKE ST. CLAIR REGION ECONOMIC SURVEY

1967



Ontario Department of Economics and Development



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# LAKE ST. CLAIR REGION ECONOMIC SURVEY

1967

Applied Economics Branch  
Office of the Chief Economist



ONTARIO DEPARTMENT OF ECONOMICS AND DEVELOPMENT

HON. JOHN P. ROBERTS  
Prime Minister of Ontario

HON. STANLEY J. RANDALL  
Minister of Economics and Development



## PREFACE

The St. Clair Economic Survey is the ninth and final study in a series of regional economic reports prepared by the Applied Economics Branch (formerly, the Special Research and Surveys Branch). The study, as in previous reports of this nature, identifies and analyzes the main elements of economic activity, indicates the direction and degree of growth on a sectoral basis and sets out the Region's contribution to the Provincial economy. In addition, we have attempted to assess the Region's economic potential and accordingly, the report provides projections over the next ten or fifteen years of anticipated economic growth for major sectors of the regional economy.

The regional economic studies are designed to support the Government's regional development programme which seeks to aid and encourage all areas of the Province in realizing their full potential for economic and social development. The surveys provide comprehensive information and analyses in a practical form useful to those working in the field of economic development on a regional basis.

The broad array of analytical and statistical material presented in this volume is intended to serve as a constructive basis for the formulation and subsequent implementation of regional development policies for the Lake St. Clair Economic Region.

Preparation of the textual and tabular material was carried out in the Applied Economics Branch under the direction of Mr. O. M. Schnick. Supervision of research and general preparation of the survey manuscript was undertaken by Mr. R. H. Frank, Chief of the Industry Studies Section in this Branch, while staff members, particularly Mrs. D. Nikolarakos, Mr. L. Bodnar, Mr. K. Williams, Mrs. O. I. Mico and Mr. P. S. Atkinson made major contributions to the study by preparing the chapters in such fields as population and labour force, agriculture and manufacturing, physical geography, energy and the tourist trade. Mr. H. Hutchison and Mr. J. Heginbottom, with the assistance of Mr. G. Matthews, cartographer, University of Toronto, were responsible for the design and preparation of maps, charts and art work while other staff members assisted in the compilation of statistical tables and related computational work.

We wish also to thank various government departments, agencies and industrial organizations for their cooperation and help in securing information. Our appreciation is accorded to the Dominion Bureau of Statistics, the Office of the Development Council — St. Clair Region, the Ontario Departments of Agriculture, Highways and Tourism and Information as well as the Hydro-Electric Power Commission of Ontario.

September, 1967

Stuart W. Clarkson  
Deputy Minister



## INTRODUCTION

Situated at the crossroads of an extensive network of major transportation routes in close proximity to the United States, the Lake St. Clair Economic Region covers an area of 2,749 square miles between Lakes Huron, Erie and St. Clair and includes the Counties of Essex, Kent and Lambton in the southwestern corner of Ontario.

Settlement of the Region commenced in the early 1700's when the first white settlers of French origin located along the banks of the Detroit River. Despite the subsequent influx of predominantly English-speaking people, the permanent influence of the French element continues to be reflected in the ethnic structure of Essex County where over 21 per cent of the population is of French extraction. Today, an indigenous population of over 450,000 people represents about seven per cent of Ontario's total population and ranks as the third most densely populated Region in the Province.

The Region's favourable location relative to major market areas in Ontario and the United States was instrumental in the development of a broad complex of secondary manufacturing facilities. The excellent soils and favourable climate yield a wide range of agricultural products for processing while the deposits of crude oil initiated the development of an extensive petrochemical industry. In addition, a large complex of automotive and transportation equipment industries has been attracted to the Region as well as other industries producing a broad range of products including machinery, building materials, clothing, furniture and electrical and glass products.


Although a wide range of industries is located within the Region, four industrial groups account for 83 per cent of the regional manufacturing output and 70 per cent of the industrial employment. Of the four, the transportation equipment industry group comprises the largest portion, accounting for 28 per cent of the Region's manufacturing output and providing jobs to almost one-third of the industrial work force. The petroleum and coal products group ranks second in terms of output, with 20 per cent of the regional total; however, being highly capital-intensive, it

employs only 14 per cent of the manufacturing workers. The food and beverages group accounts for almost one-fifth of the output and the same proportion of workers, while the chemical and chemical products group accounts for 16 per cent of the output and 14 per cent of the industrial employment.

Favourable natural conditions, an increasing market demand for the area's agricultural products and the wide range of institutional facilities available to farmers are some of the major factors that have led to the present structure and high level of development of agriculture in the Region. The favourable soil and climatic conditions which prevail in Essex and Kent Counties and to a lesser extent in Lambton, permit the successful production of a wide variety of cash crops, such as winter wheat, corn, soybeans, tomatoes and sugar beets. While livestock production has gradually shifted from dairy cattle to beef cattle, the area devoted to pasture is continuously decreasing in favour of cash crops. Extensive use of agricultural machinery in many phases of farm operations has been increasing rapidly with the result that farms in the Region are now the most intensively mechanized in Ontario.

Although manufacturing and agriculture form the primary basis of the Region's economy, the tourist trade has become an increasingly important sector of economic activity during the last decade. Endowed with the warmest climate in Eastern Canada, miles of sandy beaches, an unusually rich historical heritage and a location which is readily accessible to millions of people in both Canada and the United States, the Lake St. Clair Region attracts thousands of tourists each year. Although tourist expenditures account for a relatively small proportion of the total regional income they nevertheless create a considerable number of employment opportunities. Reflecting the gradual decrease in the length of the average work week and the steady increase in the propensity to travel, the tourist industry is likely to occupy an even more prominent position within the regional economy over the next decade than is currently the case.

This report examines in detail the structure and historical background of the Region's economy on a sectoral basis and provides a comprehensive review of the underlying socio-economic fabric.



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## PHYSIOGRAPHY

As topography and geological structure have a significant impact on patterns of land use and settlement, a brief review of the physiographic and climatic features of the Region will provide a general background for the evaluation and interpretation of the regional economy. The Lake St. Clair Economic Region, the most southerly region of Canada, covers an area of 2,749 square miles between Lakes Huron, Erie and St. Clair, and includes the Counties of Essex, Kent and Lambton in the southwestern corner of Ontario.

The underlying rock formations, which were laid down in a huge continental basin some 400 million years ago, have little direct influence on the configuration of present landforms since more recent deposits have covered the rock-base. Although most of the Region is underlain by black shales (or compressed and hardened clays), Essex and part of Kent have a limestone bedrock.

The glacial deposits forming the present landforms are less complex than in other Regions of Ontario due to the fact that the Lake St. Clair Region was not too close to the various centres of continental ice-masses during the Ice Age, less than 10,000 years ago. The predominant surface features are gently undulating ground moraines or till plains, which were formed beneath the ice mass and then abandoned when the ice front retreated. Terminal moraines, consisting of unsorted glacial debris, form low ridges which mark the edge of the ice sheet. Parallel to the shore of Lake Huron in the northeast corner of the Region, the Wyoming moraine forms a broad ridge which marks the last advance of the Lake Huron ice-sheet. To the southeast the Blenheim moraine forms a 50-100 foot clay ridge, which similarly represents the limit of the last advance of ice from the Lake Erie centre.

The resultant flat nature of the Region was increased by post-glacial activity when melting ice raised the water-level of the Great Lakes to flood the surrounding areas. Existing slight elevations in the till plains were lowered due to wave-erosion, while depressions were filled up by shallow deposits of lacustrine sediments. Sands and gravels mark the



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margins of these glacial lakes, with remnants of narrow wave-cut terraces or beaches fringing the former shore-line.

A forerunner of the Thames River covered a large area with a veneer of sand upon the clay floor after it had formed a delta where it entered the lake. However, subsequent river and marine activity have only slightly modified the topography of the Region. The most striking modification along the Lake Erie shore has been the development of sand spits: Ron-deau Spit has been built up from the east, while Point Pelee juts straight out from the shore with sand accumulation by waves from both east and west.

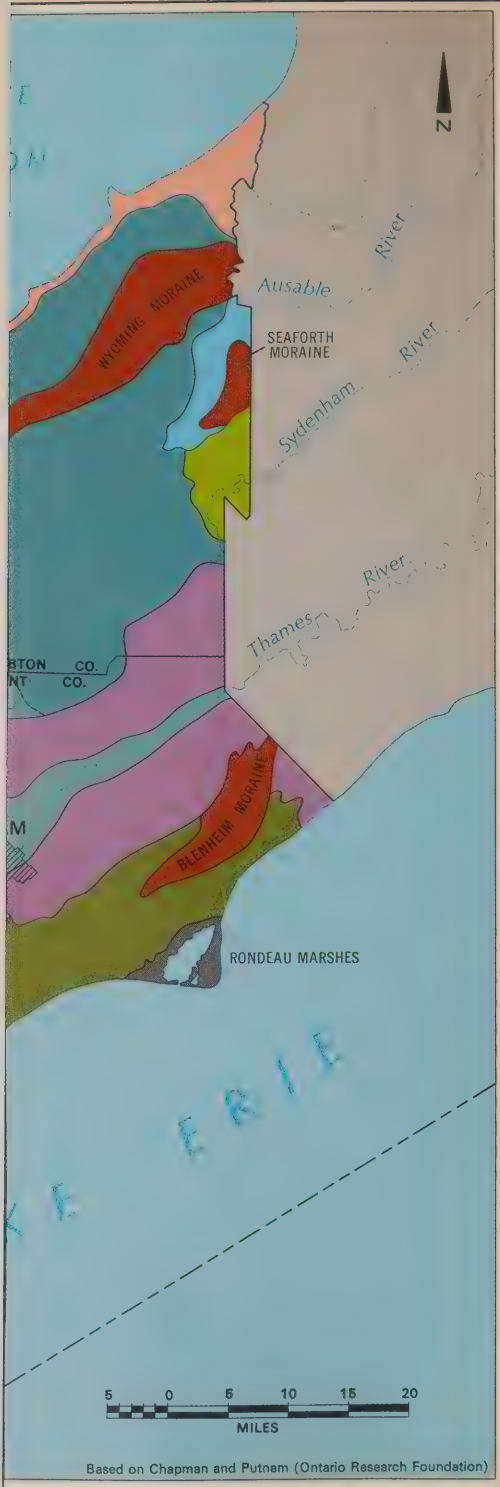
In such a flat area, consisting largely of heavy clays, it is not surprising that drainage is rather poor. Swamps, however, are rare, and tile drainage-systems have appreciably improved the agricultural potential of the Region. Most of the area drains into Lake St. Clair via the Thames and Sydenham Rivers. Only the northeastern section drains into Lake Huron, largely through the Ausable River which also forms part of the Region's eastern boundary. Streams which flow directly into Lake Erie are short, but the shorecliffs of Lake Erie are heavily dissected by gullies. Within the Region the Thames River meanders over a wide flood-plain while in the sandy area to the east it has cut a valley 50-100 feet deep. Due to its very low gradient which is less than 1 foot per mile, the river frequently overflows its banks causing spring floods which deposit a rich reddish alluvium over much of its valley.

Physically and climatically the Lake St. Clair Region is near the northern fringe of the American Corn Belt and has the mildest climate in Ontario, due to its southerly latitude, gentle relief, and continental location modified by the moderating influence of Lakes Erie, Huron, and St. Clair.

|         |         | Mean<br>Monthly<br>Average<br>Temperature | Mean<br>Monthly<br>Maximum<br>Temperature | Mean<br>Monthly<br>Minimum<br>Temperature | Average<br>Annual<br>Precipitation | Average<br>Annual<br>Snowfall |
|---------|---------|---|---|---|------------------------------------|-------------------------------|
| Chatham | January | 26.1°                                     | 31.9°                                     | 20.2°                                     | 30.44"                             | 39.8"                         |
|         | July    | 72.7°                                     | 82.9°                                     | 62.5°                                     |                                    |                               |
| Sarnia  | January | 24.9°                                     | 31.0°                                     | 18.8°                                     | 28.50"                             | 33.35"                        |
|         | July    | 69.7°                                     | 79.4°                                     | 60.0°                                     |                                    |                               |

Although still below freezing point the mean January temperatures are not too severe, whereas the mean July temperatures are relatively high. Annual precipitation is about 28-34", with comparatively low snowfall in winter. There is a slight summer precipitation maximum — 52 per cent of the precipitation at Chatham falls between April and September — and the highest amount is generally recorded in May. The Lake St. Clair Region has one of the longest frost-free periods in Ontario, and







## PHYSIOGRAPHY

this is especially significant for agriculture. Spring frosts end, on average, by May 6th at Chatham, whereas autumn frosts do not begin until about October 15th, giving an average frost-free period of 162 days per year. Over 56 years, this frost-free period has ranged from a maximum of 189 days to a minimum of 128 days.

On the basis of predominant landforms, the Lake St. Clair Economic Region is subdivided into the physiographic regions and sub-regions shown in the accompanying map.

The Essex Plain, covering almost all of Essex county and the adjacent southwestern part of Kent County, is a till plain, which has been modified by post-glacial wave erosion and lake-deposition. Although the area is level, slight surface undulations create a certain amount of natural drainage which has been substantially improved by artificial drainage. A semi-bog type of soil, the Brookston Clay Loam, which developed under moisture-loving trees is the characteristic soil. Agriculture in this area is highly mechanized, and tends to specialize in corn and soybean production, although alfalfa, wheat, oats, barley, beans, and sugarbeet are also important. Livestock is generally limited except along the better drained strips which have rather acid soils and lack soluble soil nutrients.

Although the limestone floor outcrops at several points, Pelee Island is a level clay plain, like the rest of Essex County; at its highest point it is only 38 feet above mean lake level. Since the island is isolated from markets, soybeans are grown instead of commercial truck crops which might be expected on the limestone areas. In the east the Blenheim moraine forms a rolling clay ridge 50-100 feet above the surrounding plain, and general mixed farming tends to be characteristic. The moraine is fringed by gravel terraces, which meet at Blenheim and extend southwest to the lake-shore; specialized farming is found on this well-drained area, with beans, tobacco, peaches, cherries and apples being commercially important. A smaller sand and gravel morainic dome rises 100 feet above the surface near Leamington and the well-drained light soils of the surrounding area are ideal for truck crops. Sandy soils forming a slightly elevated area around Harrow were laid down as a group of shallow-water sand bars in the post-glacial lake. Once a tobacco centre, Harrow now specializes in truck and canning crops, particularly asparagus, tomatoes and sweet corn. Recently formed sand spits extend into Lake Erie at the Rondeau Spit and Point Pelee, and when drained, the silt-loam soils of the marshes behind the sand dunes, form important onion-producing areas.

Although essentially similar to the Essex Plain sub-region, the Lambton Plain has a shallow veneer of lacustrine clay over the till formation, but has a better natural drainage. As a result there are more woodlots and more pasture farms, particularly on the moraines and the narrow extension of the Stratford Till Plains, but also fewer areas of

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corn, beans and sugarbeets.

Separating these two modified till plains is a flat clay plain, the Chatham Flats. The lower part is extremely level and is composed of deep lake-deposited clays, but in Chatham Township a shallow surface layer of sand covers the clay. South and east of the city of Chatham, beds of silt appear, while west of the city, black muck has accumulated in two large tracts and the clay is also interrupted by a few sandy spots. The development of this region was delayed until municipal ditches were installed, but is now an important area of cash crops — chiefly corn, beet, soybeans, tobacco, peas and other canning crops, while livestock are secondary but still significant. This fertile area is unfortunately vulnerable to spring floods and frequent summer droughts, but due to the relative scarcity of livestock and the dominance of row crops the chief agricultural problems are related to the renewal of the organic content and the maintenance of the granular structure of the soil.

The western edge of another area of clay soils, the Ekfrid Clay Plains of the Lake Erie Economic Region, extends into the east of the Region; this area also grows corn, but tends to place more stress upon pasture-land for beef cattle.

The St. Clair Delta, found at the entrance to Lake St. Clair on the Canadian side of the South Channel, forms a bird's-foot pattern of sand or silt islands, distributary channels and marshes, but its 64 square miles are used only for pastures.

The Bothwell Sand Plain, to the east of the Region, represents part of an ancient delta in a post-glacial lake. Sands are spread thinly over a clay floor so that this area tends to have poor drainage with low-grade soils. The wetter areas remain wooded, but the sandy loam soils could become valuable for truck or canning crops if a demand for these arose in this location.

Sands again predominate in the Huron Fringes to the north of the Region. After making a hairpin turn at Grand Bend, the Ausable River flows the length of the Ipperwash sand dunes to Port Franks before entering Lake Huron. Sandy beaches continue along the Lake Huron shore to Point Edward at the mouth of the St. Clair River. The dunes generally form a belt 1½ miles wide, and behind their protective cover lagoons and marshes have formed. In the east, much of the Thedford marsh has been drained and developed for celery, onions and other special crops, while the Blackwell marsh to the west is also used horticulturally.



# GENERALIZED LAND USE LAKE ST. CLAIR REGION

- Urban areas
- Orchards and horticulture
- Hay, grain and soybeans
- Tobacco
- Improved permanent pasture
- Unimproved grazing and woodland
- Swamp



# POPULATION

## Historical Background

The Lake St. Clair Region, located at the southernmost border of Ontario, was first settled by American Indians whose villages were scattered along the narrowest part of the Detroit River and over Southern Ontario generally.

In the County of Essex the first white settlers were of French origin and they located along both banks of the Detroit River in connection with a French Fort built at Detroit in 1701. These early inhabitants remained after the British took over the Fort and their influence in Essex is reflected even today where over 21 per cent of the County's population is of French background. The County obtained its name from Governor Simcoe in 1792 and received a considerable influx of English-speaking population at the close of the American Revolution when Detroit was handed over to the Americans. Essex soon acquired County status in 1853 and its population, which in 1871 was estimated to be 80 per cent rural, is now some 85 per cent urban due mostly to the increasing industrialization of the Windsor area.

Known as "The Southern Gateway of Canada", Windsor was incorporated as a village in 1854, as a town in 1858 and became a city in 1892. Its strategic location opposite growing Detroit made it a railway terminal and consequently, its population increased rapidly and placed Windsor far ahead of its neighbours, Sandwich and Amherstburg. Population growth was greatly stimulated with the advent of the automotive industry and the founding of Ford City in 1904, which became the City of East Windsor in 1929. Subsequently, the adjoining "Border Cities" of East Windsor, Walkerville, Windsor and Sandwich were amalgamated as the City of Windsor in 1935. Today Windsor is well known as a centre of automobile manufacture and its development has been largely due to its locational advantage of both land and water routes and the existence of Detroit across the border as the greatest automobile manufacturer in the world.

Kent County was originally created in 1792 and encompassed much



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more territory than its present boundaries which were established in 1850. Chatham, the County seat, was surveyed as early as 1795 and the first log cabin was built around 1800, making it one of the earliest settlements in Western Ontario. Chatham obtained city status in 1895 and is now an industrial community as well as the centre of a prosperous agricultural area with a county population which is over 43 per cent rural.

Originally all three counties in the Lake St. Clair Region were included in the Western District established in 1800. Although settlers came to the Lambton area after 1800, land surveys had to await a treaty with the Chippewa Indians in 1827. British immigrants began to arrive soon after the treaty and retired officers of both army and navy settled along the riverfront, while tenant farmers and labourers opened up the interior. With the abolition of the Western District in 1849, Lambton became a provisional County and was named after Lord Durham (John George Lambton). Among the pioneers of Lambton County was the Hon. Malcolm Campbell of Perth, Lanark County, who founded Sarnia in 1833 and attracted Lanark settlers to this area.

Sarnia which was incorporated as a town in 1856 and as a city in 1914, remained a small oil centre until the establishment of Government-owned Polymer Corporation in 1942. Since then, other major chemical plants and oil refineries have followed rapidly and with the opening of the St. Lawrence Seaway in 1959, Sarnia developed into an important international port and experienced accelerated population growth.

### Present Population and Growth

From the sparsely populated area of the 18th century, Lake St. Clair has now grown to 449,776 people or 7.2 per cent of the provincial population taken in the 1961 Census. This figure represents a population density of 163.6 persons per square mile, ranking as the third most heavily populated Region in the Province. Within the Region, the heaviest concentration of population is in Essex County where 57.4 per cent of the regional total resides. Lambton County accounts for 22.7 per cent, while Kent has the remaining 19.9 per cent of the population. Essex with a density of 365.2 persons per square mile is the sixth most heavily populated County in

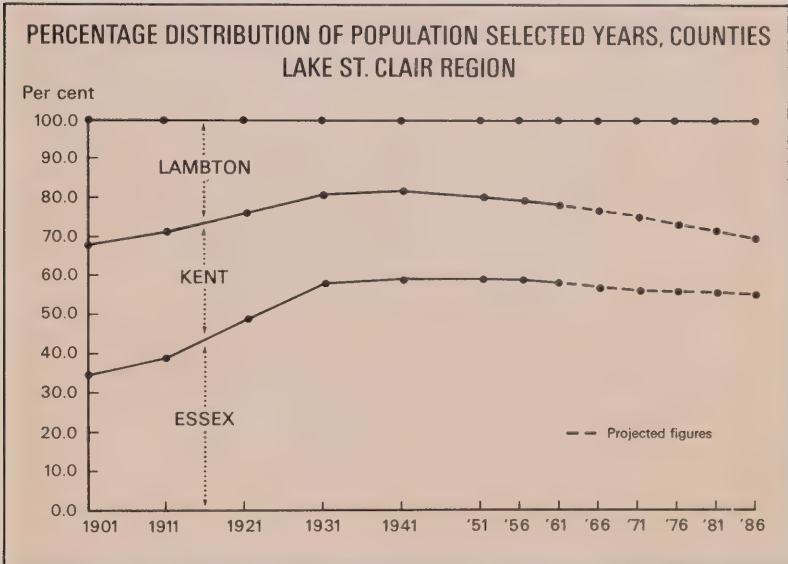
| POPULATION DENSITY, COUNTIES,<br>LAKE ST. CLAIR REGION, 1951, 1956 AND 1961 |   |              |              |
|---|---|--------------|--------------|
|   | Population Density in persons per square mile |              |              |
|   | 1951  | 1956         | 1961         |
| <b>A-Border</b>   |   |              |              |
| Essex   | 307.1   | 349.2        | 365.2        |
| Kent  | 86.2  | 93.0         | 97.4         |
| Sub-Total   | 182.3   | 204.5        | 213.9        |
| <b>B-Lambton</b>  |   |              |              |
| Lambton   | 66.7  | 80.0         | 90.9         |
| <b>Total, Region</b>  | <b>135.0</b>                                  | <b>153.6</b> | <b>163.6</b> |
| Total, Ontario  | 13.4  | 15.7         | 18.1         |

## POPULATION

Ontario, while Kent and Lambton are well above the Provincial average of 18.1 persons per square mile.

During the present century, the growth rate of population in the Lake St. Clair Region has varied markedly from decade to decade, ranging from a negligible growth during the 1900's to a high of 2.63 per cent per annum during the 1920's and again from 1951 to 1956. Average growth per annum, however, during the period 1901-1961 has been 1.63 per cent which is just below the 1.75 per cent growth rate for the Province as a whole.

A more detailed analysis of individual counties within the Region reveals even greater variation in the population growth pattern. Essex, for example, recorded the highest rate in the Region during the 1910's and 1920's when annual population growth reached 4.25 per cent and 4.50 per cent, respectively. This growth reflected the rapid development of the automotive industry in the Windsor area during this period. In the 1930's, however, growth per annum dropped sharply to 0.88 per cent due to the generally low birth rates of the 30's. During the next twenty years population increased at 2.00 per cent annually, but remained below the Provincial rate of 2.50 per cent, as a result of the low growth rate in the 1956-1961 period with the reduction in automobile output and the consequent withdrawal of many people from this area.



Prior to World War II, population growth in the neighbouring Counties of Kent and Lambton was very small. Since 1941, however, Kent has experienced a growing industrial activity stimulated by the economic

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

expansion in Essex County and its population subsequently increased at an average rate of 1.50 per cent annually. With the expansion of the chemical industry in the Sarnia area, Lambton recorded the highest growth rate in the Region over the 1941-1961 period. The average for the twenty years was 3.00 per cent annually which was higher than the population growth in the Province as a whole. The highest growth rate occurred during 1951-1956 when population increased at 3.75 per cent per annum as a result of the 1953 extension of the Interprovincial Pipeline to Sarnia and the spectacular expansion of the petrochemical industry employing an increasing number of people.

| RATE OF POPULATION INCREASE,<br>LAKE ST. CLAIR REGION AND ONTARIO |  |              |
|---|--|--------------|
|   | Annual Growth of Population<br>Region<br>% | Ontario<br>% |
| 1901-1911   | Nil  | 1.50         |
| 1911-1921   | 2.00                                       | 1.50         |
| 1921-1931   | 2.63                                       | 1.63         |
| 1931-1941   | 0.71                                       | 1.00         |
| 1941-1951   | 2.25                                       | 2.00         |
| 1951-1956   | 2.63                                       | 3.25         |
| 1956-1961   | 1.25                                       | 2.88         |
| 1951-1961   | 2.00                                       | 3.13         |
| 1941-1961   | 2.13                                       | 2.50         |
| 1901-1961   | 1.63                                       | 1.75         |

### Natural Increase and Migration

The population growth of an area is influenced by natural increase and migration accompanied by economic development and industrialization. After the war, there was a sharp increase in population as the birth rate rose in response to a basic change in social values whereby people married at an earlier age and tended to have larger families while the death rate decreased with a higher life expectancy due to improvements in medical care as well as higher standards of living. Since 1956, however, there has been a sharp decline in the birth rate from 26.6 per thousand of population to 24.1 in 1963 in the Province as a whole, and from 27.8 to 23.4 in the Lake St. Clair Region. These lower birth rates can be explained partly by the decline in the percentage of women between the ages of 15 to 45, which is the main child bearing group. In 1951, 44.0 per cent of the Region's female population was in this group, whereas by 1961 the ratio had fallen to 39.6 per cent of total female population, reflecting the low birth rates of the 1930's and the war years. An additional reason for the sharp decrease of the birth rate is the decline of marriages per thousand of population since 1956 when the marriage rate dropped from 8.6 to 7.0 by 1963 in both the Lake St. Clair Region and the Province as a whole. The improvement and wider acceptance of birth control methods has been an

## POPULATION

important factor contributing to the continuing decline of the birth rate in recent years.

Although life expectancy has increased with improvements in health conditions, the death rate in the Lake St. Clair Region has risen from 8.5 per thousand of population in 1956 to 9.0 in 1963 as a result of a heavier concentration of people in the 65 and over age group. Whereas in 1951, 7.6 per cent of the population fell in this group, by 1961 the ratio had increased to 8.5 per cent of total population. In comparison, the death rate in Ontario declined from 8.7 to 8.3 per thousand of population during the same period, while the proportion of total population in the 65 and over age group dropped from 8.7 per cent in 1951 to 8.1 per cent by 1961.

Relative rates of population growth are also influenced to a large extent by the rate of migration from abroad as well as inter-county and inter-provincial movements. Although high birth rates and low death rates will increase the population of an area in the short-run, people entering the labour force will move to more developed areas if the population growth is not accompanied by an expansion in economic activity.

During the decade 1951-1961 the Region's population increased by some 21.2 per cent with natural increase accounting for 20.7 per cent, while net migration made up the remaining 0.5 per cent. Among the Counties, however, there have been sharp variations between the two factors affecting population. In Essex there was a net emigration of 1.5 per cent whereas natural increase was some 20.4 per cent resulting in an overall growth of 18.9 per cent over the decade. As was noted earlier in the chapter, a considerable withdrawal of people occurred in the 1956-1961 period from the Windsor area, when 4.5 per cent of the 1956 County population emigrated.

Kent County also reveals some interesting results over the 1951-1961 period when net emigration was as high as 5.8 per cent of the 1951 population base. This decline, however, was offset by a natural growth of 18.8 per cent, thus increasing the population by some 13.0 per cent over the decade. The net emigration from this area may be explained by the fact that it is mostly an agricultural county and although it has high birth rates

### FACTORS IN THE GROWTH OF POPULATION, COUNTIES, LAKE ST. CLAIR REGION, 1951 TO 1961 AND 1956 TO 1961

|                      | 1951—1961          |                     |                  | 1956—1961          |                     |                  |
|----------------------|--------------------|---------------------|------------------|--------------------|---------------------|------------------|
|                      | Actual<br>Increase | Natural<br>Increase | Net<br>Migration | Actual<br>Increase | Natural<br>Increase | Net<br>Migration |
| <b>A—Border</b>      |                    |                     |                  |                    |                     |                  |
| Essex                | 41,068             | 44,350              | -3,282           | 11,317             | 22,491              | -11,174          |
| Kent                 | 10,299             | 14,885              | -4,586           | 4,065              | 7,491               | - 3,426          |
| Sub-total            | 51,367             | 59,235              | -7,868           | 15,382             | 29,982              | -14,600          |
| <b>B—Lambton</b>     |                    |                     |                  |                    |                     |                  |
| Lambton              | 27,171             | 17,567              | 9,604            | 12,192             | 9,399               | 2,793            |
| <b>Total, Region</b> | <b>78,538</b>      | <b>76,802</b>       | <b>1,736</b>     | <b>27,574</b>      | <b>39,381</b>       | <b>-11,807</b>   |



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

there tends to be an outflow of young people to other parts which offer better opportunities in industry. Viewing the population growth of the Border Sub-Region as a whole, Essex County which accounts for 74.3 per cent of the total had the largest impact on its growth while agricultural Kent, accounting for 25.7 per cent of the population, had a smaller effect.

Lambton, on the other hand, has experienced a population growth resulting from both natural increase and net migration. Over the 1951-1961 period population has grown by 36.2 per cent with natural increase accounting for 23.4 per cent while net migration was responsible for the remaining 12.8 per cent. About 55.1 per cent of this population increase occurred in the first half of the inter-censal period.

### Rural-Urban Distribution

Population growth accompanied by accelerated industrialization has resulted in an advanced urbanized economy while at the same time rural population has declined with increased productivity in agriculture. In the 1961 Census, the proportion of population living in urban centres was 75.4 per cent of the total population while rural population accounted for the remaining 24.6 per cent. Urban population increased by 25.8 per cent between 1951 and 1961 whereas rural population rose by 8.8 per cent over the same period. In actual figures, the urban population in 1961 stood at 338,974 compared with 269,412 in 1951 while the corresponding figures for the rural population were 110,802 and 101,826, respectively.

The Border Sub-Region was by far the more urbanized area in 1961 with 77.8 per cent of total population residing in urban centres while the remaining 22.2 per cent lived in rural areas. Within the Sub-Region, Essex was the more urbanized County with some 85.1 per cent urban population and 14.9 per cent rural, whereas, in Kent only 56.8 per cent of the population lived in urban centres and 43.2 per cent in rural areas. However, Kent County has recorded a growth of 32.9 per cent in its urban population over the 1951-1961 period accompanied by 5.6 per cent decline in the rural population. Essex has shown a more balanced increase in rural-urban population, the growth amounting to 15.5 per cent in the rural sector and 19.5 per cent in urban population.

During the same period Lambton County has become increasingly urbanized with a growth of 44.5 per cent in its urban population. The proportion of the urban population in the County has increased from 63.2 per cent in 1951 to 67.1 per cent in 1961. Rural population as well has shown the largest growth in the Region, with an overall increase of 22.1 per cent over the decade, while its share of total population dropped from 36.8 per cent in 1951 to 32.9 per cent by 1961.

The Windsor Metropolitan area and Sarnia Urban area were the two major agglomerations of population accounting for some 56.6 per cent of the regional population in 1961. Total population of the Windsor Metropolitan area stood at 193,365 in 1961, showing an increase of 18.2 per cent



## POPULATION

over the previous decade. As more people moved to the suburbs, however, Windsor City proper decreased by 4.7 per cent from 120,049 in 1951 to 114,367 in 1961. Annexation of the Towns of Riverside and Ojibway and portions of the Townships of Sandwich East, Sandwich West and Sandwich South effective January 1, 1966, have increased the population of Windsor City proper, however, by a considerable number. The Sarnia Urban area registered a growth of 51.8 per cent from 40,366 in 1951 to 61,293 in 1961, while Sarnia City showed an increase of 46.9 per cent from 34,697 to 50,976 over the same period. Both Metropolitan Windsor and Sarnia Urban areas displayed a more rapid growth in the 1951-1956 period when population increased by 13.6 per cent and 27.5 per cent, respectively, as compared with 4.0 per cent and 19.1 per cent between 1956 and 1961.

Chatham City, another large centre in the Region, showed population net gain of 40.6 per cent from 21,218 people in 1951 to 29,826 in 1961. The largest increase took place between 1956 and 1961 when population growth amounted to 34.0 per cent as compared with 4.9 per cent between 1951 and 1956.

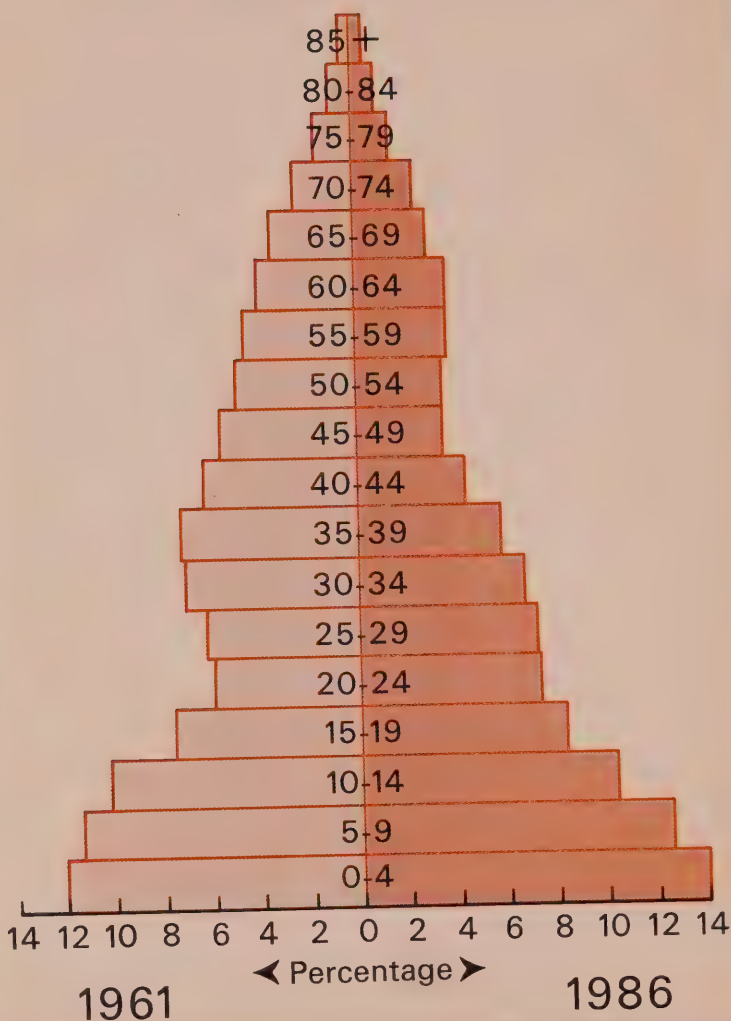
| <b>POPULATION OF INCORPORATED CITIES, TOWNS<br/>AND VILLAGES OF 5,000 AND OVER, 1951 TO 1961</b> |         |         |         |                       |
|--|---------|---------|---------|-----------------------|
|  | 1951    | 1956    | 1961    | % change<br>1951—1961 |
| Chatham  | 21,218  | 22,262  | 29,826  | + 40.6                |
| Leamington   | 6,950   | 7,856   | 9,030   | +29.9                 |
| Riverside  | 9,214   | 13,335  | 18,089  | +96.3                 |
| Sarnia   | 34,697  | 43,447  | 50,976  | + 46.9                |
| Wallaceburg  | 7,688   | 7,892   | 7,881   | + 2.5                 |
| Windsor  | 120,049 | 121,980 | 114,367 | — 4.7                 |

### Age Distribution

Demographic growth in the Region has also changed the distribution of population falling within the various age groups. For instance, the percentage of total population in the 5 to 19 age category, which may be considered as the main school age group, increased from 24.0 per cent in 1951 to 28.8 per cent in 1961. While the working age group, 20 to 64 years of age, declined from 56.6 per cent to 50.6 per cent over the decade, the 65 and over age category increased from 7.6 per cent to 8.5 per cent with the under five age class remaining virtually unchanged.

The median age of population taken in the 1961 Census is estimated at 28 years which is roughly the same as that for the Province as a whole and although there is not too much variation between the Region and the Province in the composition of the age groups, there is a slight difference in the 20 to 64 working age group which accounts for 52.6 per cent of the Provincial population compared with 50.6 per cent for the Region. The other notable deviation is in the 5 to 19 age group where the respective figures are 27.3 per cent and 28.8 per cent.

# AGE DISTRIBUTION OF POPULATION LAKE ST. CLAIR REGION 1961 AND 1986 (PROJECTED)



Within the Region, however, there is marked differentiation in the age distribution of the population. The under five age group accounts for some 11.9 per cent of the population in Essex, 12.0 per cent in Kent and 12.7 per

## POPULATION

cent in Lambton, while the respective shares in the school age category are 28.4 per cent, 29.1 per cent and 29.5 per cent. In the working age class, Essex has the highest proportion of the population with some 51.1 per cent, while in Kent the same age group accounts for 49.7 per cent and 49.9 per cent in Lambton. The relative shares of population falling in the 65 and over group are 8.6 per cent, 9.2 per cent and 7.9 per cent, respectively.

### Projections

As recent growth patterns have been associated with industrial expansion and urbanization it is reasonable to assume that the same relationship will continue in the future. In estimating the level of immigration, however, there are certain limitations due to unpredictable factors which have a strong bearing on the rate of migration. Birth and death rates are more stable variables and unless we experience drastic changes in human attitudes a continuation of present trends during the forecast period has been assumed. It is also likely that industrial areas will continue to gain from immigration and since Ontario is expected to broaden its manufacturing base it is estimated that it will receive some 10,000 to 30,000 immigrants per annum while in forecasting regional population, a net internal migration of 2,000 to 6,000 people annually has been assumed.

Recent demographic studies suggest that the Region's population will reach some 760,000 to 798,000 by 1986 depending on the rate of immigration while the provincial population will range from 10.4 million to 11.2 million. The relative share of the Region's population in the provincial total is expected to remain virtually unchanged, ranging between 7.3 per cent and 7.1 per cent as compared with 7.2 per cent in 1961.

Under the assumption of a maximum net internal migration of 6,000 people per annum, it is estimated that the under five and 5 to 19 age groups will account for a larger proportion of the total regional population than in the past. In 1961 they constituted 12.1 per cent and 28.8 per cent, respectively, whereas by 1986 the relative shares are anticipated to be 13.9 per cent and 31.2 per cent of the projected population. The working age group, 20 to 64 years of age, is expected to decline appreciably from 50.6 per cent in 1961 to 46.5 per cent by 1986, while the older age category will remain virtually the same.

It is important to remember, however, that these projections are tenuous and have been made on the basis of past trends and their continuation in the future.

# LABOUR FORCE, EARNINGS AND INCOME

## Growth Pattern of the Labour Force

The number of people comprising the labour force in the Lake St. Clair Region totalled 161,005 or 6.7 per cent of Ontario's total work force in 1961. This figure represented 53.9 per cent of the population 15 years and over while the comparable figure for Ontario stood at 56.6 per cent. About 77.3 per cent of the total labour force worked in the Border Sub-Region while Lambton Sub-Region was responsible for the remaining 22.7 per cent. The densely populated County of Essex with its industrial economy accounted for 57.3 per cent of the work force while agricultural Kent absorbed 20.0 per cent of the labour market supply.

Since 1941 the Region's labour force has increased at an average annual rate of 1.75 per cent which is substantially lower than the 2.13 per cent growth per annum for the Province as a whole. During the 1940's, labour force in the Region expanded at 2.50 per cent per annum and increased from 114,373 in 1941 to 146,077 in 1951 or 7.7 per cent of the Provincial total. This growth was well above the 1.88 per cent in Ontario as a whole; however, during the 1950's the labour force increased at 1.00 per cent annually while Ontario experienced a growth of 2.50 per cent per year. This is partly explained by the withdrawal of many people from Essex County with a reduction in automobile production in the Windsor area. In fact, the Border Sub-Region experienced a negligible growth of 0.58 per cent annually over the 1951-1961 decade while Lambton increased at an annual rate of 2.63 per cent with the expansion of the petrochemical industry in and around the Sarnia area. Examining the twenty-year period, Essex County's labour force increased at 1.63 per cent annually while Kent and Lambton Counties experienced growth rates of 1.13 per cent and 2.50 per cent per annum, respectively.

Growth of the labour force reflects to a large extent the rapid post-war population increase in Ontario. The main factor, however, influencing the labour market supply is the population in the working age category. As a large number of immigrants were in the younger working-

## LABOUR FORCE, EARNINGS AND INCOME

age group, the market supply was greatly altered by Ontario's population increase during the post-war period and particularly in the 1950's.

Population 15 years and over has grown at an average annual rate of 1.38 per cent in the Region and 1.88 per cent in Ontario over the 1941-1961 period. During the 1940's, the growth rate in the Lake St. Clair Region was 1.88 per cent per annum higher than the 1.63 per cent growth experienced by the Province. In the 1950's, however, population 15 years and over increased at an annual rate of 1.00 per cent while in Ontario it expanded at 2.25 per cent annually. The labour force, in both the Region and the Province, increased more rapidly than the population 15 years and over during the 1941-1961 period. An important factor in this higher growth is the continuing trend of more women entering the labour force.

| ANNUAL GROWTH OF LABOUR FORCE,<br>LAKE ST. CLAIR REGION, 1941-1961*                                  |                                 |      |        |   |              |      |        |
|--|---------------------------------|------|--------|---|--------------|------|--------|
|  | Population<br>15 Years and Over |      |        | % | Labour Force |      |        |
|  | Total                           | Male | Female |   | Total        | Male | Female |
| -----  |                                 |      |        |   |              |      |        |
| A-Border   |                                 |      |        |   |              |      |        |
| Essex  | 1.38                            | 1.13 | 1.63   |   | 1.63         | 0.88 | 4.25   |
| Kent   | 0.88                            | 0.75 | 1.00   |   | 1.13         | 0.42 | 4.00   |
| Sub-total  | 1.25                            | 1.00 | 1.50   |   | 1.50         | 0.75 | 4.25   |
| B-Lambton  |                                 |      |        |   |              |      |        |
| Lambton  | 2.13                            | 2.13 | 2.25   |   | 2.63         | 2.00 | 5.25   |
| Total, Region  | 1.38                            | 1.25 | 1.63   |   | 1.75         | 1.00 | 4.50   |
| Total, Ontario   | 1.75                            | 1.75 | 2.00   |   | 2.13         | 1.63 | 4.00   |
| *For 1941 and 1951, Census statistics show population 14 years and over, in and not in labour force. |                                 |      |        |   |              |      |        |

During the early part of this century large families and greater preparation of food in the home kept the majority of women out of the labour force. With labour saving devices at home and increasing use of pre-cooked foods, however, domestic work has become considerably lighter and consequently many women are free to enter the labour force. This trend is reinforced by the growing importance of the service industry in which the majority of women are employed and the continuing urbanization. In addition to the above, is the fact that wartime shortages compelled many women to enter the labour force, and while some left the work force after the war, many continued to work.

The female sector of the labour force has grown markedly over the 1941-1961 period averaging 4.50 per cent annually in the Region and 4.00 per cent per annum in Ontario. These growth rates are considerably higher than the increase experienced in the female population 15 years and over during the period under discussion. In fact, population 15 years and over advanced at 1.63 per cent annually in Lake St. Clair and 2.00 per cent per year in Ontario during the period extending from



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

1941 to 1961. Within the Region, Lambton County recorded the highest growth averaging 5.25 per cent per year while female labour force in Essex and Kent increased at 4.25 per cent and 4.00 per cent per annum, respectively.

In 1961, the number of women in the regional labour force stood at 43,101 or 26.8 per cent of the total compared with 17,913 in 1941 or 15.7 per cent of the labour market supply. In contrast, the female sector of the total Provincial labour force amounted to 692,448 or 28.9 per cent in 1961 growing from 318,139 or 20.4 per cent of the total in 1941. Statistics for 1951 indicate that female participation accounted for 19.8 per cent of the labour force in Lake St. Clair while in the Province as a whole the respective proportion was 23.6 per cent.

| <b>LABOUR FORCE BY SEX,<br/>LAKE ST. CLAIR REGION, 1961</b> |                |                |               |
|---|----------------|----------------|---------------|
|   | Total          | Male           | Female        |
| <b>A-Border</b>   |                |                |               |
| Essex   | 92,279         | 66,575         | 25,704        |
| Kent  | 32,118         | 23,799         | 8,319         |
| Sub-total   | 124,397        | 90,374         | 34,023        |
| <b>B-Lambton</b>  |                |                |               |
| Lambton   | 36,608         | 27,530         | 9,078         |
| <b>Total, Region</b>  | <b>161,005</b> | <b>117,904</b> | <b>43,101</b> |
| Total, Ontario  | 2,393,015      | 1,700,567      | 692,448       |
| Region as % of Ontario                                      | 6.7            | 6.9            | 6.2           |

Although the number of male workers in the Region has increased in absolute terms from 96,460 in 1941, to 117,221 in 1951 and subsequently to 117,904 in 1961, the relative share of total labour force declined from 84.3 per cent to 80.2 per cent and 73.2 per cent, respectively during the Census years. Comparable figures for Ontario totalled 1,244,987, 1,441,444 and 1,700,567 people or 79.6 per cent, 76.4 per cent and 71.1 per cent.

Census data for the Region indicate that the proportion of female population 15 years and over in the labour force increased from 21.8 per cent in 1951 to 28.7 per cent by 1961 while male participation dropped from 85.4 per cent to 79.3 per cent during the same period. A similar trend was observed in the Province as a whole, the relative female participation rates being 26.1 per cent in 1951 and 32.6 per cent in 1961 whereas the proportion of male population 15 years and over in the labour force declined from 84.2 per cent in 1951 to 80.7 per cent in 1961. An important reason for the decline in male participation is the continuing trend to a more extended period of formal education which affects the younger age group. Although this factor applies to women as well, it is more pronounced in the male population who normally remain in the labour market for a longer part of their lives. In addition, the retirement age is declining and thus the older age group active in the

## LABOUR FORCE, EARNINGS AND INCOME

labour force has decreased.

### Projections

Recent studies made by the Office of the Chief Economist on labour force projections have been based on population estimates in the Province and are tentative since they have been made on the basis of past trends and their continuation in the future.

Based on these estimates, it is expected that the Region's total labour force will reach some 208.2 to 215.7 thousand people by 1976 depending on the rate of immigration, whereas total Provincial work force will range between 3,108.8 and 3,273.1 thousand people. The relative share of the Lake St. Clair labour force in the Provincial total is expected to remain virtually the same fluctuating between 6.7 per cent and 6.6 per cent as compared with 6.7 per cent in 1961.

Assuming a maximum net internal migration of 6,000 people per annum, it is estimated that the female labour force will account for a larger proportion of the regional total than in the past. By 1976 it is expected that 29.4 per cent of regional labour force will be represented by the female sector while the remaining 70.6 per cent will come from the male population. In 1961, they constituted 26.8 per cent and 73.2 per cent, respectively. Labour force taken as a proportion of the population 15 years and over will continue to rise in the female sector increasing from 28.7 per cent in 1961 to 31 per cent by 1976 while the comparable proportion of male workers will decline from 79.3 per cent in 1961 to 73 per cent by 1976.

| <b>LABOUR FORCE AS A PER CENT OF POPULATION<br/>15 YEARS AND OVER,<br/>LAKE ST. CLAIR REGION, 1961 AND 1976*</b> |             |           |             |           |             |           |
|--|-------------|-----------|-------------|-----------|-------------|-----------|
|  | Male        |           | Female      |           | Total       |           |
|  | 1961        | 1976      | 1961        | 1976      | 1961        | 1976      |
|  | -----       |           | -----       |           | -----       |           |
|  |             |           | %           |           |             |           |
| 15-24  | 59.5        | 55        | 37.1        | 35        | 48.3        | 45        |
| 25-44  | 95.8        | 95        | 31.2        | 34        | 63.1        | 64        |
| 45-64  | 90.5        | 89        | 29.7        | 34        | 60.7        | 62        |
| 65 +   | 32.8        | 26        | 7.0         | 7         | 19.3        | 16        |
| <b>Total</b>   | <b>79.3</b> | <b>74</b> | <b>28.7</b> | <b>31</b> | <b>53.9</b> | <b>52</b> |
| *Based on assumed net migration of 30,000 per annum to Ontario and a net internal migration of 6,000 per annum.  |             |           |             |           |             |           |

The continued expansion of the trade and service industries and their increasing share in gross national output will attract more women to the work force. The proportion of women in the labour force in the 15-24 age group will tend to decline as more women will attend formal training programs while the proportion of women in the 25-64 age group will rise, particularly the 45-64 age category. Many women in this age group will have raised their children and a large number will enter the labour market while the proportion of women in the 65 and over group

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

in the work force will remain practically unchanged.

Male participation in the 15-24 age group will decline as well with an increasing number of people attending school and post-secondary institutions. The 25-64 age group will remain virtually the same while the 65 and over category will decline with earlier retirement age and rising pension funds.

### Industry Divisions

The service industries and other tertiary sectors including transportation, trade, finance, public utilities, government services and other related economic activities were the largest regional employer in 1961 absorbing some 78,399 people or 48.7 per cent of total labour force while some 47,934 or 29.8 per cent of the total were employed in manufacturing. Agriculture and construction engaged 20,145 and 10,189 people respectively, equivalent to 12.5 per cent and 6.3 per cent of the labour market supply.

Some 39.2 per cent of the male labour force was employed in the service industries with 34.9 per cent and 14.5 per cent engaged in manufacturing and agriculture, respectively. Similarly, the largest proportion of the female labour force was employed in the service industries group accounting for 74.9 per cent of the total while 15.8 per cent and 7.0 per cent worked in manufacturing and agriculture.

Reviewing the three largest centres in the Lake St. Clair Region, Windsor engaged 68,659 people or 42.6 per cent of the 1961 regional labour force while the relative shares of Sarnia and Chatham were 18,514 and 11,276 equivalent to 11.5 per cent and 7.0 per cent of the total, respectively. Within Metropolitan Windsor, the largest single employer was the service industries sector with 54.2 per cent of the City's labour force while manufacturing accounted for 35.8 per cent of the total. In Sarnia, the service and related industries also represented the largest employer in the City with 51.8 per cent of the total labour force while the manufacturing industry was responsible for 36.0 per cent. In Chatham, there was a more pronounced difference between the two industrial groups with the service industries accounting for 63.9 per cent of the total while manufacturing absorbed 25.8 per cent of the City's labour market supply.

Labour requirements in the Region are expected to increase in all employment sectors with the exception of agriculture whose labour force is expected to decrease during the 1961-1976 period. The shifts in sectoral composition of the Region's labour force are presented in the following table.

While the relative share of the labour force engaged in manufacturing and the service industries is expected to rise from 29.8 per cent to 31.0 per cent and from 48.7 per cent to 52.1 per cent, respectively, the agricultural work force will decline from 12.5 per cent in 1961 to 6.9 per cent in 1976. The miscellaneous group which includes the con-

## LABOUR FORCE, EARNINGS AND INCOME

struction industry will absorb an increasing number of the labour force rising from 9.0 per cent to 10.0 per cent of the total work force during the forecast period.

| <b>SECTORAL DISTRIBUTION OF LABOUR FORCE,<br/>LAKE ST. CLAIR REGION, 1961 AND 1976</b> |                |                |               |              |
|--|----------------|----------------|---------------|--------------|
|  | 1961           | 1976           | 1961<br>— — % | 1976<br>— —  |
| Agriculture  | 20,145         | 14,800         | 12.5          | 6.9          |
| Manufacturing  | 47,934         | 66,900         | 29.8          | 31.0         |
| Service Industries   | 78,399         | 112,400        | 48.7          | 52.1         |
| Miscellaneous  | 14,527         | 21,600         | 9.0           | 10.0         |
| <b>Total</b>   | <b>161,005</b> | <b>215,700</b> | <b>100.00</b> | <b>100.0</b> |

The anticipated loss in agricultural land resulting from the continuing growth of Windsor, Sarnia and Chatham and increasing urbanization of smaller centres will account largely for the decline in agricultural demand for labour. In addition, increasing mechanization of agriculture will displace a number of people even though the Lake St. Clair Region is predominantly a labour intensive crop area. The agricultural labour force is expected to decline gradually over the 1961-1976 period with the projected expansion of the manufacturing and service industries absorbing the major portion of the shift in the regional work force.

### Occupational Divisions

The number of people who worked for wages or salaries has increased some 67.9 per cent from 1941 to 1961 whereas total labour force expanded by 40.8 per cent over the same period. The number of wage and salary earners in 1941 stood at 78,077 or 68.3 per cent of total labour force while by 1961 the number had grown to 131,097 people or 81.4 per cent of the total regional work force. An important factor in this increase is the gradual disappearance of the small store owner in many marketing areas. The rise and spread of the supermarket and more recently the large discount stores and the continuing trend of department store shopping has forced a large number of small store owners out of the market. In Kent a larger proportion of the labour force is self-employed as agriculture is the leading industry represented by many small holdings. Even here, however, the proportion of people who worked for wages or salaries has risen from 54.6 per cent in 1941 to 73.0 per cent by 1961.

The leading occupational group in 1961 was craftsmen, production process and related workers with 26.7 per cent of the total while farmers and farm workers accounted for 12.6 per cent. The clerical group absorbed 12.1 per cent while services and recreation occupied 11.5 per cent of the regional labour force.

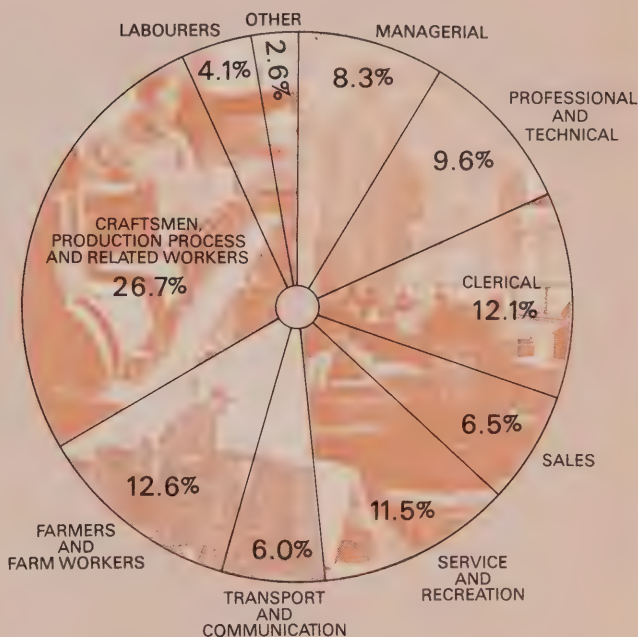
In the female sector of the labour force 27.7 per cent and 23.8 per cent were classed as clerical, service and recreation, respectively, while

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

8.1 per cent were engaged as craftsmen, production process and related workers.

The proportion of the male labour force grouped as craftsmen, production process and related workers was 33.6 per cent whereas 14.8 per cent were occupied as farmers or farm workers and 10.1 per cent had managerial positions.

### DISTRIBUTION OF OCCUPATION DIVISIONS OF LABOUR FORCE LAKE ST. CLAIR REGION, 1961



## EARNINGS AND INCOME

### Labour Income

Reviewing the period 1951 to 1964, labour income which accounts for approximately two-thirds of total net income, increased from \$291.4 million in 1951 to \$603.3 million by 1964 equivalent to an average annual



## LABOUR FORCE, EARNINGS AND INCOME

growth of 5.25 per cent compared with 7.50 per cent for the Province. While regional labour income increased in absolute terms its relative share of Ontario's total declined from 7.7 per cent in 1951 to 6.2 per cent in 1964. The major cause for this decline was the transfer of a significant portion of existing automotive operations out of the Windsor area although new industries such as oil refining and chemical processing in Lambton County partially offset the decrease.

Within Lake St. Clair, the Border Sub-Region accounted for the major share of labour income totalling some \$475.7 million in 1964 or 78.8 per cent. Essex was the leading County with \$388.0 million or 64.3 per cent of the regional total while Kent had \$87.6 million or 14.5 per cent whereas Lambton County represented 21.2 per cent or \$127.6 million.

Labour income in Kent experienced an above average growth of 6.00 per cent per annum over the 1957-1964 period and consequently increased its relative share from 14.1 per cent in 1957 to 14.5 per cent in 1964. Essex County had the second highest growth in the Region at 5.50 per cent annually and its share of total labour income increased from 63.9 per cent to 64.3 per cent during the period under review. Labour income in Lambton advanced at an annual rate of 4.75 per cent resulting in a decline in its relative share of the total from 22.0 per cent in 1957 to 21.2 per cent in 1964. On the whole, labour income in the Lake St. Clair Region experienced a moderate growth of 5.50 per cent per annum compared with a Provincial average of 6.25 per cent.

| <b>ANNUAL GROWTH OF LABOUR INCOME,<br/>LAKE ST. CLAIR REGION, 1957 TO 1964</b> |   |  |
|--|---|--|
|  | Aggregate<br>Labour Income<br>— — — — — % | Per Capita<br>Labour Income<br>— — — — — |
| <b>A-Border</b>  |   |  |
| Essex  | 5.50                                      | 5.25                                     |
| Kent   | 6.00                                      | 3.50                                     |
| Sub-total  | 5.50                                      | 4.75                                     |
| <b>B-Lambton</b>   |   |  |
| Lambton  | 4.75                                      | 3.00                                     |
| <b>Total, Region</b>   | <b>5.50</b>                               | <b>4.50</b>                              |
| Total, Ontario   | 6.25                                      | 4.25                                     |

Although aggregate labour income figures are an important economic indicator, they tend to distort the magnitude of actual growth in the area as they do not reflect shifts in the labour force. Income figures on a per capita basis, therefore, supplement the discussion on regional labour income. Whereas average income per employee increased 4.25 per cent per annum in the Province as a whole, the Lake St. Clair Region experienced a growth of 4.50 per cent over the 1957-1964 period. Within the Region, labour income per capita in Essex County recorded the

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

highest growth with 5.25 per cent annually while labour income per employee in Kent and Lambton Counties increased by annual increments of 3.50 per cent and 3.00 per cent, respectively.

In terms of absolute magnitude, average labour income per employee in the Region increased from \$2,822 in 1957 to \$3,836 in 1964 compared with \$2,915 to \$3,906 in the Province.

| <b>LABOUR INCOME PER CAPITA OF LABOUR INCOME RECIPIENTS,<br/>LAKE ST. CLAIR REGION, SELECTED YEARS</b> |              |              |              |              |              |
|--|--------------|--------------|--------------|--------------|--------------|
|  | 1957         | 1959         | 1961         | 1963         | 1964         |
|  | — — — — —    | — — — — —    | — — — — —    | — — — — —    | — — — — —    |
| <b>A-Border</b>  |              |              |              |              |              |
| Essex  | 2,896        | 3,182        | 3,340        | 3,812        | 4,151        |
| Kent   | 2,235        | 2,507        | 2,415        | 2,834        | 2,865        |
| Sub-total  | 2,750        | 3,017        | 3,107        | 3,559        | 3,834        |
| <b>B-Lambton</b>   |              |              |              |              |              |
| Lambton  | 3,114        | 3,236        | 3,578        | 3,742        | 3,842        |
| <b>Total, Region</b>   | <b>2,822</b> | <b>3,064</b> | <b>3,208</b> | <b>3,598</b> | <b>3,836</b> |
| Total, Ontario   | 2,915        | 3,197        | 3,428        | 3,678        | 3,906        |

Despite the relative decline in aggregate labour income during the first seven years of the period under review, wages and salaries earned per employee in Essex increased from \$2,896 to \$4,151 remaining above the regional average during the eight-year period and above the Provincial average during the last two years. A significant factor in this is the prominence of the automotive industry in the Windsor-Detroit area and the high wages and salaries earned in this sector. Lambton County, although experiencing consistently higher incomes per capita than the Provincial average and the highest wages paid in the Region during 1957 to 1962, dropped to second place after Essex in 1963 and 1964. The importance of the petrochemical operations around the Sarnia area and the above average wage rates paid in this industry account largely for the favourable per capita labour income which increased from \$3,114 in 1957 to \$3,842 by 1964. The agricultural County of Kent remained consistently below the regional and Provincial levels of income during the period under discussion although improving from \$2,235 in 1957 to \$2,865 in 1964.

Based on current growth patterns total Provincial labour income is expected to expand at an average annual rate of 4.25 per cent to 5.25 per cent consistent with national "economic goals" set by the Economic Council of Canada in its 1964 annual review. By 1976, it is estimated that Ontario's labour income will range between \$15,923.8 million and \$17,856.8 million in terms of constant 1964 dollars.

Recent trends indicate that wages, salaries and commissions earned in the Lake St. Clair Region will fluctuate around 6.2 per cent of the Provincial total reaching some \$987.3 million to \$1,107.1 million in terms

## LABOUR FORCE, EARNINGS AND INCOME

of constant 1964 dollars at the end of the forecast period. With the transportation equipment, petrochemical, foods and beverages industries and agriculture likely to continue to play a dominant role in the Region's economy, these economic sectors are expected to account for the major portion of labour income generated in the Region.

### Personal Income

Within the observational range extending from 1960 to 1963, average annual personal income in the Region increased from \$3,646 to \$4,060 equivalent to 3.60 per cent growth per annum compared with an annual average of 3.00 per cent in the Province where the annual average increased from \$3,711 to \$4,052.

Within the Region, Lambton County consistently recorded the highest average annual income increasing from \$3,901 in 1960 to \$4,176 in 1963 while remaining above the Provincial and regional levels of average income. Personal income in Essex County as well was above the regional average during the four-year period and exceeded the Provincial average during 1963 increasing from \$3,668 in 1960 to \$4,154 by 1963 whereas average income in Kent County rose from \$3,285 to \$3,668. Increasing industrial activity in the Region and above average wage rates paid in the automotive and petro-chemical industries characteristic of Essex and Lambton will continue to strengthen the relative position of regional average annual income in comparison with income levels generally prevailing in Ontario.

| AVERAGE ANNUAL INCOME,<br>LAKE ST. CLAIR REGION, 1960 TO 1963 |              |              |              |              |
|---|--------------|--------------|--------------|--------------|
|   | 1960         | 1961         | 1962         | 1963         |
|   | — — — — —    | — — — — —    | — — — — —    | — — — — —    |
| <b>A-Border</b>   |              |              |              |              |
| Essex   | 3,668        | 3,738        | 3,893        | 4,154        |
| Kent  | 3,285        | 3,191        | 3,448        | 3,668        |
| Sub-total   | 3,574        | 3,600        | 3,778        | 4,028        |
| <b>B-Lambton</b>  |              |              |              |              |
| Lambton   | 3,901        | 3,951        | 4,057        | 4,176        |
| <b>Total, Region</b>  | <b>3,646</b> | <b>3,676</b> | <b>3,840</b> | <b>4,060</b> |
| Total, Ontario  | 3,711        | 3,825        | 3,932        | 4,052        |

Reviewing the relative frequency of income recipients by income class in the Region there is considerable variation from Ontario's overall income distribution. While the number of people receiving less than \$2,000 per annum averaged some 25.1 per cent of the total number of income recipients in the Province during the 1960-1963 period, the relative proportion in Lake St. Clair averaged about 28.3 per cent of the total. However, the percentage of recipients in the under \$2,000 income class has declined from 28.9 per cent in 1960 to 27.0 per cent by 1963 in the Region and from 26.1 per cent to 24.3 per cent in Ontario as a whole.

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

In fact, the number of income recipients falling in the lower income classes up to \$4,000 has decreased steadily during the period under review reflecting a more equitable distribution of personal income in the Region and in the Province as a whole. While the proportion of people receiving less than \$4,000 per year has declined in the Region from 62.6 per cent in 1960 to 57.1 per cent in 1963 the comparable percentages for the Province as a whole were 64.1 per cent to 58.1 per cent of total income recipients.

| <b>DISTRIBUTION OF PERSONAL INCOME,<br/>LAKE ST. CLAIR REGION AND ONTARIO, 1960 AND 1963</b> |   |              |              |              |
|--|---|--------------|--------------|--------------|
| Income<br>Class<br>\$  | 1960  |              | 1963         |              |
|  | Region  | Province     | Region       | Province     |
|  | — — — % of total no. of income recipients — — — |              |              |              |
| under 1,999  | 28.9  | 26.1         | 27.0         | 24.3         |
| 2,000-2,999  | 17.2  | 19.1         | 16.3         | 17.0         |
| 3,000-3,999  | 16.5  | 18.9         | 13.8         | 16.8         |
| 4,000-4,999  | 16.2  | 15.4         | 13.6         | 15.0         |
| 5,000-5,999  | 9.3   | 8.8          | 11.9         | 10.8         |
| 6,000-9,999  | 9.8   | 8.9          | 14.3         | 12.4         |
| 10,000 and over  | 2.1   | 2.8          | 3.1          | 3.7          |
| <b>Total</b>   | <b>100.0</b>                                    | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |

The number of people receiving over \$6,000 per year has shown an appreciable rise in the Region increasing from 11.9 per cent in 1960 to 17.4 per cent in 1963 whereas in Ontario the relative proportions were 11.7 per cent to 16.1 per cent. The continuing trend to higher wage levels and setting of minimum wage rates by the government and unions have played an important role in the increasing uniformity of income distribution.

Within the Lake St. Clair Region, there is an even wider variation of income distribution with Kent County showing a more inequitable distribution than either Essex or Lambton. In 1960 about 71.2 per cent of income recipients received less than \$4,000 per annum although by 1963 the relative proportion fell to 65.3 per cent. Seasonal employment and low wages characteristic of agricultural areas account largely for the low income levels of the majority of income recipients in this County. In Essex, the group of people receiving less than \$4,000 per year dropped from 61.7 per cent to 54.7 per cent of total income recipients while in Lambton the relative shares were 57.1 per cent and 55.9 per cent during the four-year period under review. It should be noted that Essex County's income distribution has improved appreciably as industrial activity has expanded in the past few years.

Lambton County with high wages paid in the petrochemical industry had 16.8 per cent of the people receiving over \$6,000 per annum in 1960 while by 1963 the proportion had risen to 22.1 per cent by far exceeding the Provincial average of 16.1 per cent of total income

## **LABOUR FORCE, EARNINGS AND INCOME**

recipients falling in the higher income groups. The relative proportions in Essex were 11.1 per cent and 17.3 per cent, respectively, while in Kent the number of people receiving over \$6,000 annually increased from 8.6 per cent to 12.5 per cent of the total during the 1960-1963 period.

While the overall trend in the Region is pointing towards a more equitable distribution of income, there is still a considerable degree of socially undesirable inequality particularly in Kent County where 30.3 per cent of the income recipients receive less than \$2,000 per annum. Based on current and past trends, however, it is expected that a gradual shift towards increasing uniformity of income distribution will take place as the proportion of people in the lower income groups tends to decline not only in Kent but in the Lake St. Clair Region as a whole.



# AGRICULTURE

## PHYSICAL CONDITIONS

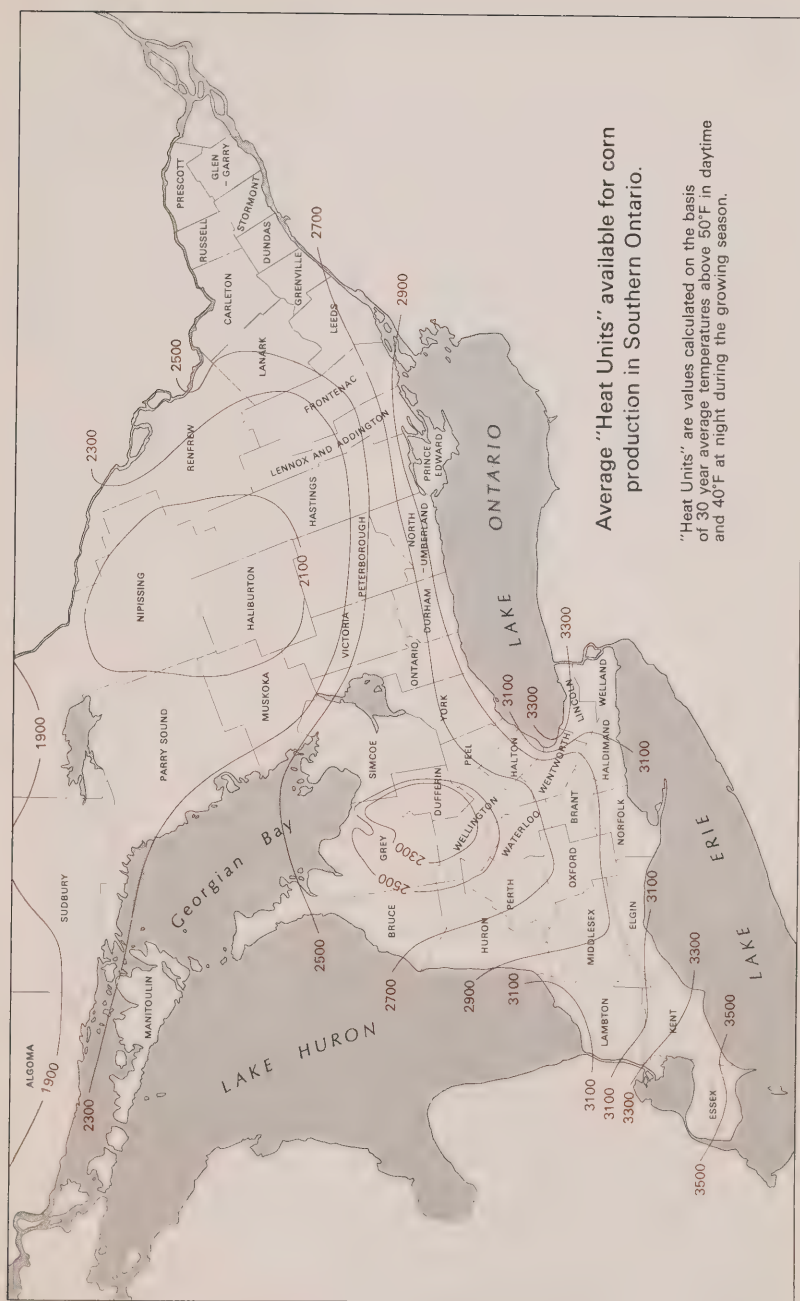
The climate of Essex and Kent Counties is one of the most favoured in the Province from the point of view of agricultural production. Essex County has the longest growing season of any area of Eastern Canada. Within the County, the Leamington area, the southernmost part of Canada, enjoys a particularly favourable position with the growing season usually beginning during the first week of April, nearly a week earlier than in any other part of the Province. In the rest of Essex and Kent Counties its duration extends on average from 203 to 213 days.

The average annual precipitation, although comparatively low (28-30 inches), is fairly well distributed during the year. However, there is seldom a year without a drought period. For this reason an increasing number of irrigation systems was installed over the last few years. In Lambton County the average length of the growing season is about 200 days, from the middle of April to the first of October, while the average annual precipitation varies from 30 to 34 inches.

## Soils and Topography

While there are many soil types in the Lake St. Clair Region, ranging from heavy clay to light sands, the Brookston clay and clay loam along with a few heavy textured soils constitute about two-thirds of the area of the Region. It is on these fertile, heavy textured soils that most of the husking-corn, soybeans, sugar beets, winter wheat and the majority of processing crops such as canning-tomatoes, sweet corn and peas are grown. A smaller area of light textured soils (sand and sandy loams), which includes the Leamington, Kingsville and Harrow districts and extends parallel to the shore of Lake Erie, is exceptionally well adapted for the growing of horticultural crops of all kinds.

The topography of the Region is mostly flat. A large portion of the heavy textured soils (especially in Essex and Kent) has been tile drained. Drainage improvement has been very effective on these soils in that it has greatly increased their capability to grow a wider range of crops.



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

### STRUCTURE OF AGRICULTURE

Fertile soils, favourable climate and geographical location have encouraged agricultural activities from the early days of settlement with the result that the Lake St. Clair Region has become one of the prime cash crop, fruit and vegetable, and livestock-raising areas of Ontario.

#### **Area, Number and Size of Farms**

According to the 1966 Census, farms occupied 86.3 per cent of the area of the Region. The comparable figure for the Province was 7.7 per cent. In southern Ontario (eliminating the Northeastern and Northwestern Economic Regions) farm land accounts for approximately 50 per cent of the total land area. While in the 1961 to 1966 period the total farm area of the Province declined by 4.1 per cent, the reduction in the area of the farms of the Region was only 1.2 per cent. Similarly, between 1961 to 1966, the rate of reduction of the number of farms of the Region was 8.3 per cent, which was slightly lower than the comparable figure for the Province as a whole (9.4 per cent).

In 1966, the average size of farms in Essex County was 82.0 acres, in Kent 132.6 acres, and in Lambton 148.9 acres. A trend to larger farm holdings is apparent throughout the Region. While in 1961 the average size of farms was 111.2 acres, in 1966 the regional average was 119.9 acres. However, this size is below the Provincial average of 162.2 acres in 1966.

#### **Conditions of Farm Land**

In 1966, in the Region, approximately 89.3 per cent of the farm land was classified as improved land, and by far the largest portion of this was employed in cultivation of crops. In Essex County 85.8 per cent of **total** farm area was under crops, and in Kent 83.9 per cent. Lambton used 58.3 per cent of its farm land for crop cultivation, which was still considerably higher than the comparable figure for the Province as a whole (46.9 per cent).

For the Region as a whole in 1966, the area under pasture occupied 10.7 per cent of the total farm land; in Essex 3.0 per cent, in Kent 5.9 per cent. In Lambton County 19.9 per cent of the farm land was used as pasture compared with the Provincial average of 16.4 per cent.

#### **Economic Classification of Farms**

In 1966, 9,431 or about 74 per cent of the farms were classed as commercial. Kent had the highest proportion of commercial farms with 84.7 per cent followed by Essex and Lambton (69.3 per cent each). The comparable figure for the Province as a whole was 64.4 per cent.

#### **Value of Agricultural Products Sold in 1951 and 1961**

The annual value of agricultural products sold in the Region increased by 62.7 per cent over the decade 1951 to 1961. This increment is below the comparable figure for the Province as a whole where a 74.9 per cent increase was recorded.

In 1961, the average value of agricultural products sold per farm

## **AGRICULTURE**

was \$6,713, which exceeded by 6.9 per cent the Provincial average. According to the 1961 Census, there were substantial divergencies within the Region. In Kent the average value of agricultural products sold was \$7,669, Essex ranked second with \$7,012, while in Lambton the average value of agricultural products sold was only \$5,286 or 15.8 per cent less than the Provincial average.

An examination of the main sources of farm income provides an informative insight into the structure of the agriculture of the Region. In Essex County, vegetables and greenhouse products represented 34.6 per cent of the total value of agricultural products sold, livestock and livestock products were second in importance with 30.7 per cent and field crops accounted for 30.6 per cent of agricultural sales.

In Kent County, field crops were the major source of farm income (50.3 per cent of total agricultural sales), vegetables and greenhouse products represented 8.3 per cent and the sale of livestock and livestock products counted for 39.7 per cent.

In Lambton County the sale of livestock and livestock products was the predominant source of farm income (76.4 per cent of total value of agricultural products sold), field crops ranked second (18.9 per cent), while the share of vegetables and greenhouse products was insignificant (3.2 per cent).

### **AGRICULTURAL PRODUCTION**

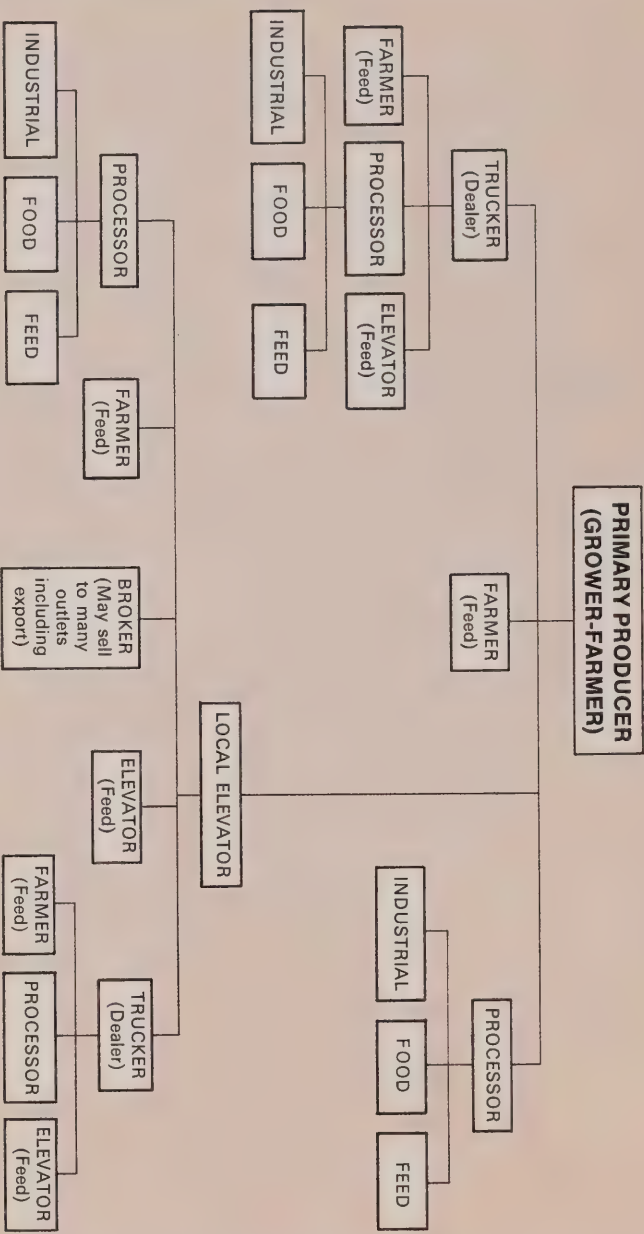
#### **Factors Influencing the Area of Crops**

The crop area of the Region reflects the combined impact of physical conditions, technical advances and socio-economic variables. The favourable soil and climatic conditions which prevail in Essex and Kent Counties and to a lesser extent in Lambton, permit the successful production of a wide variety of cash crops, such as winter wheat, corn, soybeans, tomatoes and sugar beets.

The acreage dedicated to each of these crops in a particular period greatly depends on their relative profitability, rates of mechanization and labour requirements. A table in the Appendix indicates that with \$186 and \$25 respectively, tomatoes and sugar beets result in considerably higher net returns per acre than winter wheat, corn and soybeans. On the other hand, while labour requirement for tomatoes and sugar beets is high and seasonal, the mechanization of wheat, corn and soybean production substantially reduce the need for labour.

These differences work in opposite directions. The area of sugar beets and tomatoes is limited to a great extent by the availability of seasonal labour. Wheat, corn and soybean growers intend to increase the scale of operations in order to more profitably utilize expensive machinery and equipment. Even more important are a number of socio-economic factors such as the capacity of the domestic market, export possibilities, import regulations, costs of production and returns in other Canadian regions. The activities of marketing boards, and contracts

# FLOW CHART OF GRAIN-CORN MOVEMENTS







—Courtesy—Ontario Department of Tourism and Information.

A typical corn field in the Region.

between growers and purchasers, also affect demand, prices, and profitability of production.

Changes which occur in all these technical and socio-economic factors partially neutralize one another. The acreage of crops in a particular time corresponds to the net effects of these interrelated variables.

### Field Crops

In 1966, the farm value of total field crops in the Region was \$102.3 million, and represented 21.6 per cent of the Provincial total. Influencing factors have varied considerably, and contributed materially to swings in total crop values and acreages in the Region. However, certain trends

| AREA AND VALUE OF MAJOR FIELD CROPS,<br>LAKE ST. CLAIR REGION, 1966 |              |           |       |                    |           |       |            |           |       |  |
|---|--------------|-----------|-------|--------------------|-----------|-------|------------|-----------|-------|--|
|   | Winter Wheat |           |       | Corn (For Husking) |           |       | Soybeans   |           |       |  |
|   | Farm Value   |           |       | Farm Value         |           |       | Farm Value |           |       |  |
|   | % of         |           |       | % of               |           |       | % of       |           |       |  |
|   | Acres        | (\$000's) | Prov. | Acres              | (\$000's) | Prov. | Acres      | (\$000's) | Prov. |  |
| A-Border  |              |           |       |                    |           |       |            |           |       |  |
| Essex   | 38,462       | 3,457     | 12.9  | 89,829             | 11,029    | 12.0  | 83,392     | 8,660     | 32.3  |  |
| Kent  | 41,499       | 3,915     | 14.6  | 195,528            | 25,199    | 27.4  | 96,184     | 9,928     | 37.0  |  |
| Sub-total   | 79,961       | 7,372     | 27.5  | 285,357            | 36,228    | 39.4  | 179,576    | 18,588    | 69.3  |  |
| B-Lambton   |              |           |       |                    |           |       |            |           |       |  |
| Lambton   | 37,035       | 3,168     | 11.9  | 72,055             | 7,356     | 8.0   | 58,189     | 5,150     | 19.2  |  |
| Total, Region   | 116,996      | 10,540    | 39.4  | 357,412            | 43,584    | 47.4  | 237,765    | 23,738    | 88.5  |  |
| Total, Ontario  | 341,386      | 26,737    | 100.0 | 786,194            | 91,990    | 100.0 | 278,849    | 26,817    | 100.0 |  |

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

can be clearly identified. While in the period 1951 to 1966, the area of winter wheat decreased to a certain extent, acreage under corn for husking increased from 195,808 to 357,412 acres (by 82.5 per cent) and under soybeans from 133,444 acres to 237,765 (by 78.2 per cent). Over the same period, reductions in acreage were experienced for oats (147,105 acres in 1951, compared with 107,290 in 1966) and hay (143,187 acres in 1951, as against 106,076 in 1966).

In 1966, the Region produced (in terms of value) 88.5 per cent of the Province's soybean crop, 47.4 per cent of corn (for husking) and 39.4 per cent of the winter wheat. Several large industries such as starch companies, distilleries, breakfast food manufacturers and feed producers are increasing their annual purchases of corn.

### Special Crops

In 1966, the area of sugar beets was 10,812 acres, which represented over 90 per cent of sugar beet acreage in Ontario. Kent alone accounted for 73.8 per cent of the total sugar beet area in the Province. The area dedicated to sugar beets has fluctuated widely. The expansion in acreage in 1958 and 1959 was prompted by the increased capacity in local plants, while falling prices in 1959 resulted in a sharply decreased acreage in the subsequent year. The unprecedented high price in 1963 (\$23.2 per ton) was a consequence of reported shortages on the world market.

Another special crop of importance in the Region is burley tobacco. Burley tobacco production is centered in Kent County. In 1964, about two-thirds of Ontario's production (1,362 out of 2,065 acres) of this type of tobacco was grown in this County. In the same year in Essex County, the area of burley tobacco was 646 acres.

### Canning Crops

The farm value of canning crops for the Region amounted to \$20.2 million in 1966. In both Essex and Kent Counties canning crops are particularly important. In 1966, these Counties produced about 68 per

| <b>AREA AND FARM VALUE OF TOMATOES,<br/>LAKE ST. CLAIR REGION, 1966</b> |                 |                          |                  |
|---|-----------------|--------------------------|------------------|
|   | Area<br>(acres) | Farm Value<br>(\$'000's) | % of<br>Province |
| <b>A-Border</b>   |                 |                          |                  |
| Essex   | 10,147          | 5,125                    | 41.0             |
| Kent  | 6,795           | 4,969                    | 39.8             |
| Sub-total   | 16,942          | 10,094                   | 80.8             |
| <b>B-Lambton</b>  |                 |                          |                  |
| Lambton   | 248             | 153                      | 1.2              |
| <b>Total, Region</b>  | <b>17,190</b>   | <b>10,247</b>            | <b>82.0</b>      |
| Total, Ontario  | 22,353          | 12,490                   | 100.0            |
| <b>Source:</b> Ontario Vegetable Growers' Marketing Board.              |                 |                          |                  |

## AGRICULTURE

cent of the total value of canning crops in Ontario. In the Region as a whole, tomatoes (for processing) accounted for 82.0 per cent, green peas for 39.0 per cent, sweet corn for 44.0 per cent, while minor canning crops such as cabbage, carrots, green and wax beans, lima beans, etc., made up 59.0 per cent of the Provincial value of output for these products. The related secondary industries also are significant. In 1962 (the latest year for which such data are available), Essex and Kent Counties contained 28 fruit and vegetable cannery establishments having a total value of shipments in excess of \$100 million. The large and highly seasonal labour requirement for both the production and processing of canning crops (especially tomatoes) represents a recurring problem.

Due to a less favourable climate, only a limited acreage is under canning crops in Lambton County.

### **Vegetables**

As already mentioned, early spring weather facilitates the production of a variety of early truck crops on the light sandy soil of Essex County especially in the area paralleling the Lake Erie shoreline. In 1964, Essex County with a farm value of \$6.4 million, produced about a quarter of Ontario's vegetables. In Kent and Lambton Counties, vegetable production is concentrated in the Eriean area and the Thedford-Grand Bend marshes, respectively, and provides about six per cent of Ontario's vegetable output. In 1964, the farm value of vegetable production for the Region was approximately \$8.0 million.

### **Greenhouses**

In Essex County, mainly in the Leamington-Kingsville area, hundreds of growers operate individual or multiple steam-heated greenhouses covering areas up to nine acres. Essex County is the largest and most intensive greenhouse vegetable growing area in Canada with about 230 acres under glass and another 60 acres covered by plastic (1966 figures). This represents about half of the total greenhouse area in the Province of Ontario. In 1966, the value of greenhouse products from the Region was estimated at \$6.5 million.

Capital requirements are high. An acre of boiler-equipped greenhouse costs about \$70,000-\$80,000 (plastic covering reduces costs by some 10-15 per cent). Greenhouses normally produce mainly cucumbers, tomatoes and a wide variety of flower crops although some greenhouses in the area are used only as starting houses for early vegetable crops which are later transplanted to the fields.

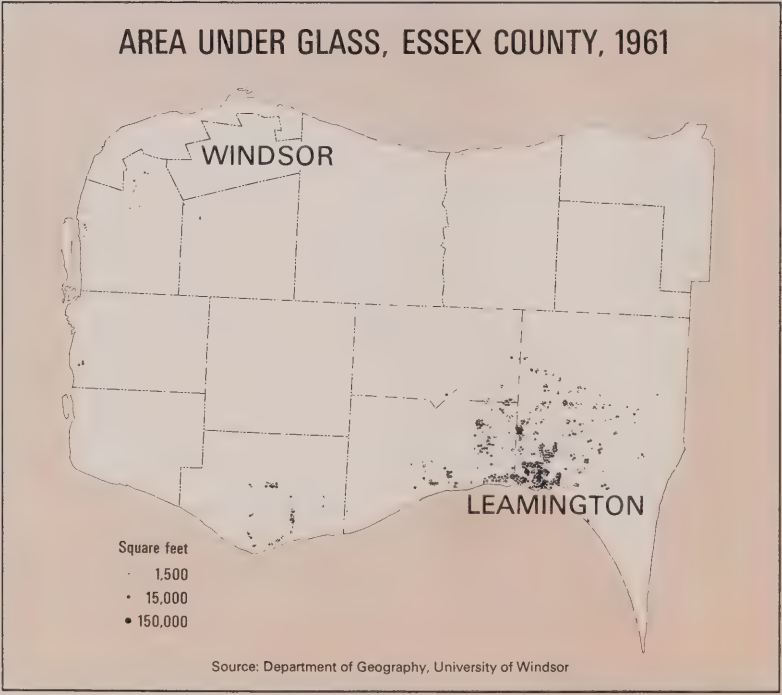
Gross revenue in greenhouse operation is estimated at \$26,000-\$28,000 per acre. The most important cost items, apart from depreciation, are fuel and labour. Almost all greenhouse establishments in Essex County utilize some family labour. In addition, considerable use is made of hired labour, much of it on a relatively permanent basis. Labour cost represents approximately one-third of gross revenue from sales. Fuel

# LAKE ST. CLAIR REGION ECONOMIC SURVEY

costs account for about a fifth of gross revenue. On this basis, costs of labour and fuel total about half of gross revenue from sales. To this must be added depreciation and a number of lesser costs including those of soil preparation, fertilizer, seeds and insurance. An approximate estimate of costs and returns is given below.

|   |                     |
|---|---------------------|
| Gross income per acre \$28,000                    |                     |
| Production costs {                                | Labour \$10,000     |
|   | Fuel 5,000          |
|   | Interest 3,600      |
|   | Miscellaneous 1,000 |
| Total costs \$19,600                              |                     |
| Return per acre of greenhouse production \$ 8,400 |                     |

The greenhouse industry is seriously affected by the unorganized character of the market and instability of prices. As the crops are perishable, an increased supply over a period of a few days quickly translates itself into a downward pressure on prices. While processing crops are generally supplied under contract written as between grower and processor in advance of planting, greenhouse products are subject to abrupt changes in price behaviour which may result not only from erratic domestic supply, but also from seasonally oriented demand and





the level of imports.

### **Orchards**

The approximately 4,500 acres of commercial orchard in the Region are concentrated in three small areas near Lake Erie around the towns of Blenheim in Kent County, and Leamington and Harrow in Essex County. With over 2,000 acres of peaches, Kent-Essex Counties are second only to the Niagara Fruit Belt. In 1964, farm value of tree fruit production for the two Counties amounted to \$1.9 million.

Large amounts of Kent-Essex apples, peaches and pears are purchased by processing companies in the area for baby food products. While southern Ontario provides the largest market for fresh fruit sales, significant quantities of peaches are shipped also to the Detroit area and the Province of Quebec.

Climatically, the Kent-Essex area is favoured with higher summer temperatures and a longer growing season than the Niagara Fruit Belt. Its peach harvest season is about ten days earlier than that of Niagara, thus enabling the Kent-Essex growers to take advantage of higher prices for early marketings. Over 20,000 acres of suitable land are available for the production of peaches and sweet cherries. However, the recent Kent-Essex experience with winter-peach tree losses together with difficulties in nursery stock has been discouraging to some growers.

In contrast, only about 300 acres of peaches are located in Lambton County and these are concentrated on a gravelly ridge near Forest and in an area adjacent to Arkona. Although winter damage to peach wood is negligible in these districts, the chance of winter injury to dormant peach blossom buds is one out of every three years. Total value of fruit tree production in Lambton County was approximately \$300,000 in 1964.

## **LIVESTOCK PRODUCTION**

### **Cattle**

Between 1951 and 1965 the number of cattle in the Region increased significantly. In 1951, cattle on farms numbered 152,500 and were valued at \$33.0 million (80.4 per cent of total value of livestock on farms). In 1965, the number of cattle was 200,870, valued at \$30.6 million (78.8 per cent of the value of total livestock in the Region).

A continuous decline in the number of milk cows can be observed, accompanied by a remarkable increase in beef cattle. In 1951, the number of milk cows and yearlings for milk purposes was 61,250, while in 1965 there were only 40,900 (33 per cent reduction). The rate of reduction was the greatest in Kent County (63 per cent), followed by Essex (27 per cent) and Lambton (22 per cent). In the same period the number of beef cattle in the Region increased by 112 per cent (from 52,688 to 111,900).

As may be expected, the volume of cattle marketing is increasing continuously in the Region. In 1951, there were 38,685 cattle sold to public stockyards, packing plants or direct to export. In 1966, the





—Courtesy—Ontario Department of Tourism and Information.

A cattle farm in Lambton County.

number of marketed cattle was 82,291. This means that over the period 1951 to 1966, the number of marketed cattle of the Region increased by 112.7 per cent. The comparative figure for the Province as a whole was 82.3 per cent. In 1966, 86.4 per cent of total steers and heifers sold in the Region were graded as "choice" or "good". The comparable figure for the Province was 81.4 per cent.

While in Essex and Kent Counties the beef cattle industry is expanding vigorously, the area of pasture is continuously decreasing in favour of cash crops. Farmers of these Counties have found several ways to alleviate the consequences of conflicts in land use. In 1966, more than 50,000 beef feeders for finishing were brought into the Region, mostly from the Prairie Provinces. Farmers of Kent County have purchased or rented extensive pasture areas in Lambton County where land is less expensive. By-products of the canning and processing plants are used for feeding at an increasing rate to reduce the demand for grain feed.

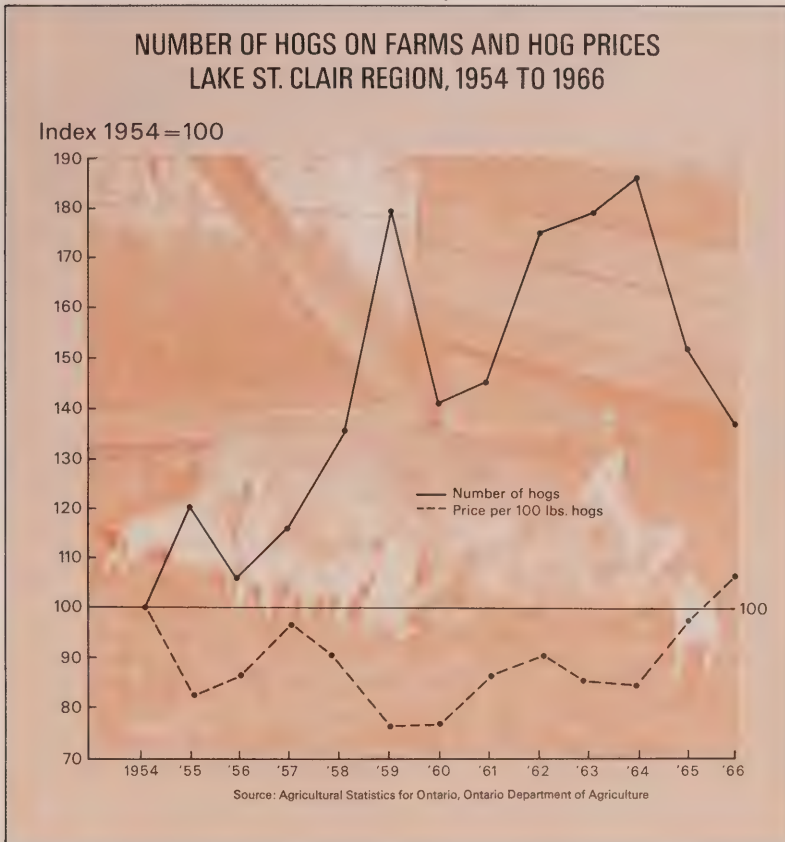
### Hogs

Increases in hog operations were slower in the Region than in the Province as a whole: the number of hogs increased by 7.3 per cent during the 1961-1966 period, while the corresponding figure for the Province as a whole was 14.8 per cent.

The chart indicates the fluctuations in hog production in the Region and the average price per 100 lbs. of B1 dressed hogs on public stockyards in Toronto. This cycle arises because of the tendency for hog

## AGRICULTURE

producers to plan production on the basis of current prices. Cyclical peaks can be observed in hog production in 1952, 1955 and 1958-60, and corresponding lows in prices in the same years.



### Poultry

While both the number and the value of hens and chickens has been decreasing continuously (2.8 million hens and chickens in 1951 and 2.0 million in 1966), turkey production showed a remarkable expansion. In 1951, there were 114,000 turkeys in the Region; in 1966, the number of turkeys was close to 600,000. Lambton County accounts for approximately 60 per cent of the Region's turkey production.

### CAPITAL AND LABOUR IN AGRICULTURE

#### Farm Capital

In the Region, as everywhere in Ontario, the amount of capital required in farming is constantly rising. Whereas in 1951 the average capital investment per acre of farm land in the Region was \$183.0, it had



—Courtesy—Ontario Department of Tourism and Information.

Turkey production in Dawn Township, Lambton County.

increased to \$306.0 (by 67.2 per cent) in 1961. The relevant figures for the Province were \$122.0 in 1951 and \$201.0 in 1961 (an increment of 65 per cent). A major cause of the rise in capital value was the increase in land and building value. While in 1951, the land and building value in this area was \$116.0 per acre of farm land, the corresponding figure was \$230.0 ten years later.

Since 1961, the price of good agricultural land has increased at a rate of 5-6 per cent per year. In 1966, the price of land was about \$400 to \$600 per acre in Essex and the southern part of Kent. In Lambton the land is less expensive, \$150 to \$250 per acre. In Essex County, lands for vegetables are sold at \$1,500 to \$2,000 per acre.

One of the results of the increase in land values is the noticeable trend toward larger farming units, in order to raise the scale of operations and take full advantage of mechanization in agriculture.

### **Farm Mechanization**

The farms of the Region are the most intensively mechanized units in the whole Province. In 1966, there were about 24,000 tractors in the area, and the number of improved acres per tractor was 56.8. The comparable figure for the Province as a whole was 74.0 acres per tractor.

The mechanization of grain harvesting is well advanced. In 1966, there were 4,691 grain combines in the Region. The number of combinable acres was 62.5 per combine. For the same year, the

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comparable figure for Ontario as a whole was 129.4 acres per combine. The Region excelled in the mechanization of hay production. According to the Census figures, there were 51.4 acres of hay per baler in this area in 1966. In the same year the Provincial average was 89.5 acres of hay per baler.

In 1966, the operations related to the growing of wheat, and other grains, corn, soybeans, green beans and other crops had been almost completely mechanized. New growing methods, the use of monogerm seed varieties and the mechanization of harvesting has considerably reduced labour requirements for sugar beet production. However, the blocking of sugar beets still requires a large number of agricultural workers in May and June.

The mechanization of farmstead operations is remarkable. The use of automatic feeding stations, a great variety of materials handling equipment, mechanized gutter-cleaners, electric milkers and facilities for piping milk directly to storage trucks is advancing steadily. Specialized poultry farms raise fowl in buildings with controlled temperature, feed and living conditions to produce only eggs or broilers. This tendency toward automation of farmstead operations is expected to continue.

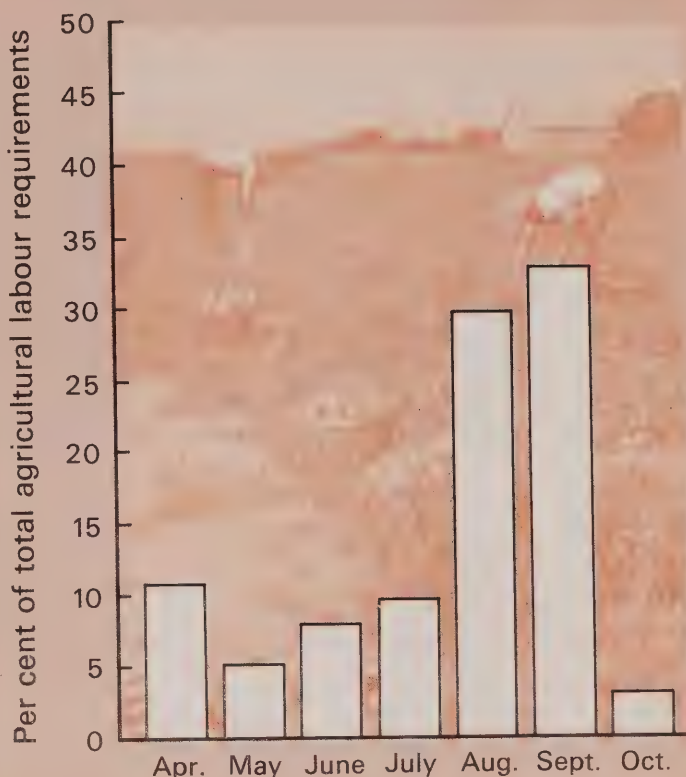
### Seasonal Labour Requirements in Agriculture

Despite advanced mechanization, the intensive agriculture of Essex and Kent Counties puts a heavy demand on labour. Because of the particular features of early vegetable, fruit and canning crop production, the labour demand is seasonal and abrupt. Peaks follow a relative lack of need for agricultural labour. In Essex County, the early vegetable planting and seeding (approximately April 20-middle of May), vegetable harvesting (end of June to the end of July) and the tomato and peach

| AGRICULTURAL LABOUR SURVEY, 1964*   |                              |      |   |                        |                                  |        |
|-------------------------------------|------------------------------|------|---|------------------------|----------------------------------|--------|
|                                     | Acreage Covered<br>by Survey |      | % of Total<br>Area of<br>Indicated<br>Crops | Total Help<br>Required | Extra<br>Help to be<br>Recruited | Period |
|                                     | Acres                        |      |   |                        |                                  |        |
| Essex                               |                              |      |   |                        |                                  |        |
| Sugar beets                         | 1,477                        | 75.3 | 617   | 553                    | May—June                         |        |
| Tomatoes                            | 3,520                        | 32.2 | 1,583                                       | 1,300                  | Aug.—Sept.                       |        |
| Kent                                |                              |      |   |                        |                                  |        |
| Sugar beets                         | 13,189                       | 99.8 | 2,067                                       | 1,625                  | May—June                         |        |
| Tomatoes                            | 3,530                        | 57.1 | 2,435                                       | 1,041                  | Aug.—Sept.                       |        |
| Total Sugar<br>Beets Surveyed       | 14,666                       | 96.6 | 2,684                                       | 2,178                  | May—June                         |        |
| Total Tomatoes<br>Surveyed          | 7,050                        | 41.2 | 4,018                                       | 2,341                  | Aug.—Sept.                       |        |
| *Surveyed by Growers' Organization. |                              |      |   |                        |                                  |        |



## PERCENTAGE DISTRIBUTION AGRICULTURAL LABOUR REQUIREMENTS APRIL TO OCTOBER, ESSEX COUNTY



harvest (August and September) represent the major peak periods.

In Kent County, the time of sugar beet-blocking (from the end of May to the middle of July) and tomato harvesting is critical. Local seasonal workers provide about half of the required labour force. The participation of high school students during the summer holidays is substantial. The rest is provided by housewives, local seasonal and migrant workers from Quebec and the Maritimes, and an increasing number from different Indian reservations.

The growers' organizations and the regional offices of the Man-power Commission make a useful contribution by surveying and assess-



## AGRICULTURE

ing the seasonal labour requirements, and advertising for and recruiting labourers from outside the area.

The alternative job opportunities in the industry of the Region, the lack of continuity of employment in agriculture and the shortage of suitable accommodation are identified as the main causes of recurring deficiency in agricultural labour supply.

| REPORTED VACANCIES*, 1964  |                     |                           |                       |                               |       |
|--|---------------------|---------------------------|-----------------------|-------------------------------|-------|
| Month  | National<br>Chatham | Employment<br>Wallaceburg | Service<br>Leamington | Regional<br>Office<br>Windsor | Total |
| May  | 199                 | 30                        | 686                   | 66                            | 981   |
| June   | 399                 | 4                         | 1,042                 | 366                           | 1,811 |
| July   | 717                 | 24                        | 2,048                 | 514                           | 3,303 |
| Aug.   | 854                 | 2                         | 1,455                 | 557                           | 2,868 |
| Sept.  | 923                 | 24                        | 1,220                 | 319                           | 2,486 |
| Oct.   | 294                 | 4                         | 268                   | 123                           | 689   |
| *Vacancies at the beginning of the month plus vacancies notified during the month. |                     |                           |                       |                               |       |

From August to October, canning companies of the Region require 3,500 to 4,000 seasonal workers. The heavy demand for labour in canneries coincides with the harvest time of canning crops, the busiest period in agriculture. Because of alternative and permanent employment opportunities in other industries, canning companies have difficulty in securing their labour requirements.

Labour shortage, especially if it is combined with labour disputes in one or more plants, may considerably slow down volume of output

Picking tomatoes at Leamington.

—Courtesy—Ontario Department of Tourism and Information.



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

and receiving capacity of canning plants, and consequently may have a detrimental effect on the normal course of the harvest of canning crops.

### INSTITUTIONAL FRAMEWORK

#### Long-Term Farm Credit

Long-term mortgage loans are available to Canadian farmers through the Federal Farm Credit Act, administered by the Farm Credit Corporation. This agency represents the major source of long-term loans to farms. The loans obtained under the Act can be used to buy farm land, erect or modernize farm buildings, purchase basic-herd livestock, and provide lime, fertilizer and seed to establish permanent planting. The maximum amount of a loan is \$55,000; the interest rate is five per cent up to \$27,500. On the amount exceeding \$27,500 the interest rate varies from time to time depending on the general level of interest rates.

In 1962, the number of loans obtained in the Region from the Farm Credit Corporation was 251, amounting to \$3,718,000 with an average of \$14,813 per loan. In 1966, the Region's farmers obtained 266 loans with a total of \$6,766,000. This represents an average per loan of \$25,436—a 72 per cent increase over the corresponding 1962 figure. It points up the need for and ability of the farmers of the Region to use long-term mortgage credit to establish or expand their operation on a profitable basis.

| NUMBER AND AMOUNT OF LOANS IN THE<br>LAKE ST. CLAIR REGION UNDER THE FARM CREDIT ACT |                 |                    |               |
|--|-----------------|--------------------|---------------|
| Year   | Number of Loans | Total Amount<br>\$ | Average<br>\$ |
| 1962   | 251             | 3,718,100          | 14,813        |
| 1963   | 300             | 4,593,100          | 15,310        |
| 1964   | 357             | 7,124,900          | 19,958        |
| 1965   | 326             | 7,335,400          | 22,501        |
| 1966   | 266             | 6,766,000          | 25,436        |

#### The Ontario Junior Farmer Establishment Loan Corporation

The Ontario Junior Farmer Establishment Loan Corporation is the only Provincial agency offering directly mortgage loans to farmers between the ages of 21 to 35. Assistance up to 80 per cent of the appraised value of the farm, to a maximum loan of \$40,000 may be approved at an interest rate of 5 per cent.

In the Region, between May 31, 1963 and the end of 1964, 129 loans were provided with a total amount of \$2.8 million. The average amount of loans was \$21,700. In the two-year period 1965-1966, there were 260 approved with a total amount of \$6.9 million (the average amount was \$26,500).

#### Marketing Plans

A considerable portion of the sale of farm products of the Region, (winter wheat, soybeans, sugar beet, canning crops, fruits, hogs and

## AGRICULTURE

milk, etc.) is regulated by marketing plans. Marketing plans are a legally constituted means for collective bargaining. Each plan must be supported by a plebiscite showing that at least 66-2/3 per cent of the producers voting are in favour of the plan.

Each marketing plan is administered by the local board of producers. Subject to the approval of the Farm Products Marketing Board, local boards are empowered to negotiate between producers and the representatives of purchasers in respect of minimum prices, forms of contracts, quality requirements, conditions of sale and shipping. Local boards directing single sales agencies are given full trading powers over the regulated farm products.

Marketing boards have considerably improved the bargaining position of farmers and made a significant contribution to the improvement of farm incomes. They have favourably influenced quality and varietal improvements of farm products, and through product promotion and market research have provided valuable information about trends and expansion possibilities. In 1964, the total farm value of agricultural products regulated by marketing plans was about \$70 million.

### **Contracted Production**

The production of canning crops and sugar beets are undertaken on a contract basis between growers and processors. Under the terms of the contract, the growers may obtain seed or plants from the processor as well as supervision, technical assistance in insect, weed and disease control measures, and a secure market at a guaranteed price for the contracted products. Processors on their part consider contracts advantageous because they provide larger and more regular sales, and enable them to control the quantity, quality and continuity of supply of their raw material. In recent years there has occasionally been a clash of interests between growers and processors over matters such as prices, grading, shipping, etc. However, these differences have been settled through negotiations.

### **Extension Services**

Through its local offices, the Extension Branch of the Ontario Department of Agriculture provides a wide range of services in the Region. These services are related to the problems of farm management, production practices, agricultural engineering and home economics. The agricultural representatives of the Extension Branch and specialists working with them organize conferences, field days, and junior farmer programmes. They cooperate with growers' and breeders' organizations and with research institutions and experimental stations. The activities of the Agricultural Offices in combination with the industrious spirit of the farmers, represent an important factor in the continuous improvement of efficiency and profitability of the Region's agriculture.

### **Western Ontario Agricultural School**

The School and associated experimental farm is located at Ridgetown,

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

Kent County. The main objective of the School is to provide young people with practical and advanced knowledge in farming. Enrolment in the two-year course is 150 to 170. The great majority of the graduates are returning to the farm. The research activities of the School are incorporated in the program of the Agricultural Research Institute, and deal with practical problems of the Region's agriculture, such as soil fertility, variety improvement of major crops, cultural practices, feed, storage, etc.

### Research Station, Harrow

The Research Station was founded in 1909 by the Canada Department of Agriculture and is situated near the town of Harrow, Essex County. The Harrow district has an earlier spring and longer growing season than any other part of Eastern Canada. Research at Harrow is concerned primarily with problems related to the production of fruits, especially peaches and early apples, vegetables and field crops with special emphasis on tobacco, hybrid corn, soybeans and sugar beets.

### Research Activities of Processing Companies

The research departments of the major processing companies are working constantly to increase yields, improve the quality and resistance of crops, test new varieties and devise more efficient production methods. Through the services of the companies' fieldmen, the results are widely applied by the farmers of the Region.

### Cooperative Associations

In 1962, there were 27 local cooperative associations in the Region with a total membership of about 10,000. The distribution of cooperatives over the counties is as follows:

|   | Number of<br>Cooperatives | Members       | Per Cent of<br>Total Membership |
|---|---------------------------|---------------|---------------------------------|
| Essex   | 12                        | 3,556         | 35.1                            |
| Kent  | 8                         | 3,944         | 38.9                            |
| Lambton   | 7                         | 2,637         | 26.0                            |
| <b>Total, Region</b>  | <b>27</b>                 | <b>10,137</b> | <b>100.0</b>                    |
| <b>Source:</b> Cooperatives Branch, Ontario Department of Agriculture, Directory of Active Business Cooperatives, 1962. |                           |               |                                 |

Local cooperatives act as central marketing agencies of farm products and as wholesalers of farm supplies, machinery and consumer goods. In 1964, the total value of wheat, corn, soybeans and other grains marketed by the cooperatives of the Region was about \$12.0 million. In addition to the above mentioned functions, they provide a number of services ranging from feed-mixing and grinding to shipping and spraying.

The classification of the Region's cooperatives on the basis of volume of operations is shown in the accompanying table.

This tabulation reveals that in 1962 two-thirds of the members belonged to cooperatives with an annual volume in excess of one million dollars. Several cooperative associations in the Region that



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operate with a capital amounting to millions of dollars, hire professional staff in increasing numbers and, in general, demonstrate their viability through the expansion of their activities.

| Volume<br>\$       | Number of<br>Cooperatives |              | Members       |              |
|--------------------|---------------------------|--------------|---------------|--------------|
|                    | No.                       | %            | No.           | %            |
| Less than 100,000  | 6                         | 22.2         | 390           | 3.8          |
| 100,000-1,000,000  | 10                        | 37.0         | 3,127         | 30.8         |
| 1,000,000 and over | 11                        | 40.8         | 6,620         | 65.4         |
| <b>Total</b>       | <b>27</b>                 | <b>100.0</b> | <b>10,137</b> | <b>100.0</b> |

### CONCLUSION AND OUTLOOK

Favourable natural conditions, a steady or increasing market demand for the area's agricultural products and the wide range of institutional facilities available to farmers are some of the major factors that have led to the present structure and high level of development of agriculture in the Region. Fluctuations in each or all of these elements may lead to some modification in the established pattern. In the Counties of Essex and Kent some expansion or contraction in the total area of field crops is possible, but major changes are not likely to take place. In these counties, high land prices and competing cash crops may limit a further major expansion of beef farming. At present, the acreage of tomatoes is restricted by labour shortage. Mechanization of the harvest, if technically and economically feasible, might provide a solution to this problem. The area of tree fruits (especially peaches) is not likely to be substantially increased on account of weather hazards.

The situation is somewhat different in Lambton, as in that County there are about 250-300 thousand acres which require tile-drainage. Such a measure would considerably improve yields and increase the choice of cash crops that can be produced. Lambton County, with its extensive land area also has considerable unused capacity in the field of beef farming.

Future developments in farming will depend not only on trends within the framework of the area's agriculture but also — and perhaps to an even greater extent — on the direction of growth in other sectors of the Region's economy. Among the outside influences likely to affect agriculture, urban growth may be expected to be a major factor. Expansion of the cities will necessarily be accompanied by a contraction of the farm land areas adjacent to these population centres. It has been estimated that an average of 200 acres of rural land is required for every increase of 1,000 persons to the urban population and that an additional 100 acres will experience urban shadow effects. By 1981, the growth of Chatham, Sarnia and Windsor may thus have absorbed some 35,000-40,000 acres of rural land. The growth of smaller urban centres, the need to build highways and roads and the necessity to provide land for recreational uses will place additional demands on the rural areas in the Region.



## **LAKE ST. CLAIR REGION ECONOMIC SURVEY**

In recognition of the prominent place occupied by the area's agriculture, the loss of prime farm lands will undoubtedly be minimized by sound land-use planning and judicious zoning provisions. The Lake St. Clair Region is one of the richest and most highly developed agricultural areas in Canada. The farmers in this part of the Province have demonstrated a remarkable adaptability in the use of mechanization, specialization and other farm-management methods and it is, therefore, expected that they will continue to make a material contribution to the sustained economic growth of the Region.

# MINING, FORESTRY, FISHING AND CONSERVATION

## Mining

Mining activities in the Lake St. Clair Economic Region are of relatively minor economic significance in terms of providing employment and generating income. According to the 1961 Census, employment in mines, quarries and oil well operations constituted less than one half of one per cent of the Region's total industrial labour force.

Nevertheless, the Lake St. Clair Economic Region produces an appreciable portion of a number of important minerals found in the Province of Ontario. In 1965, 68 per cent of the Province's domestic salt supply and 62 per cent of its crude petroleum and natural gas originated in the Region. Thus while no metallic minerals are mined in the Region, non-metallic minerals, fuels and structural materials are of some importance.

In 1965, the Region's total mineral production was valued at \$24 million, representing 2.4 per cent of the Province's total. Fifty-six per cent (\$13.5 million) of the value of mineral production originated in Essex County while Lambton and Kent County were responsible for twenty-eight (\$6.6 million) and 15 per cent (\$3.6 million) respectively.

| <b>VALUE OF MINERAL PRODUCTION BY MAIN GROUPS OF MINERALS,<br/>COUNTIES, LAKE ST. CLAIR REGION, 1965</b> |                  |                  |                         |                   |                        |
|--|------------------|------------------|-------------------------|-------------------|------------------------|
|  | Non-<br>Metallic | Fuels            | Structural<br>Materials | Total<br>Value    | Per Cent<br>of Ontario |
|  | -----            | -----            | \$ -----                | -----             | -----                  |
| <b>A-Border</b>  |                  |                  |                         |                   |                        |
| Essex  | 8,106,269        | 136,395          | 5,304,467               | 13,547,131        | 1.3                    |
| Kent   | —                | 1,634,478        | 1,989,889               | 3,624,367         | 0.4                    |
| Sub-total  | 8,106,269        | 1,770,873        | 7,294,356               | 17,171,498        | 1.7                    |
| <b>B-Lambton</b>   |                  |                  |                         |                   |                        |
| Lambton  | 1,400,307        | 3,736,521        | 1,441,184               | 6,578,012         | 0.7                    |
| <b>Total, Region</b>   | <b>9,506,576</b> | <b>5,507,394</b> | <b>8,735,540</b>        | <b>23,749,510</b> | <b>2.4</b>             |



—Courtesy—Ontario Department of Tourism and Information.

A salt mine at Warwick, Lambton County.

On a sub-regional basis, Essex County produces by far the major portion (85 per cent) of the Region's output of non-metallic minerals valued at \$8.1 million in 1965. Lambton County accounts for only 15 per cent (\$1.4 million) while non-metallic minerals are totally absent in Kent County.

Only one type of non-metallic mineral—salt—is found in the Lake St. Clair Region. Total tonnage extracted in 1965 represented 2.7 million. The largest salt mine is situated at Ojibway, near Windsor, and is operated by the Canadian Rock Salt Company Ltd. Dow Chemicals of Canada Ltd. and Domtar Chemicals Ltd. (Sifto Salt Division) own and operate two salt mines located near Sarnia in Lambton County.

In addition to supplying a major portion of Ontario's salt output, the Lake St. Clair Region also produces a significant portion of the Province's fuel output (62 per cent), originating primarily in Lambton County with an output of 461,000 barrels of crude oil valued at \$1.5 million and 5.9 billion cubic feet of natural gas equivalent to \$2.3 million in 1965. Second in importance to Lambton County, in terms of fuel production, is Kent County where 137,000 barrels of crude petroleum worth \$436,000 and 3.1 billion cubic feet of natural gas valued at \$1.2 million were produced in 1965. Essex County supplies only a negligible portion of the Region's fuel output producing 41,000 barrels of crude petroleum in 1965 and 18 million cubic feet of natural gas valued at \$130,000 and \$7,000, respectively.

## MINING, FORESTRY, FISHING AND CONSERVATION

The output of structural materials in the Lake St. Clair Region in 1965 was valued at \$8.7 million representing an increase of 61 per cent over the 1958 output level. The composition of structural materials extracted in 1965 was as follows: sand and gravel accounted for 37 per cent, lime for 31 per cent, limestone for 16 per cent and clay products for 16 per cent. Essex County is the major producer of structural materials accounting for 61 per cent of the Region's output in 1965, while Kent and Lambton County were responsible for 23 per cent and 16 per cent, respectively.

### Fishing

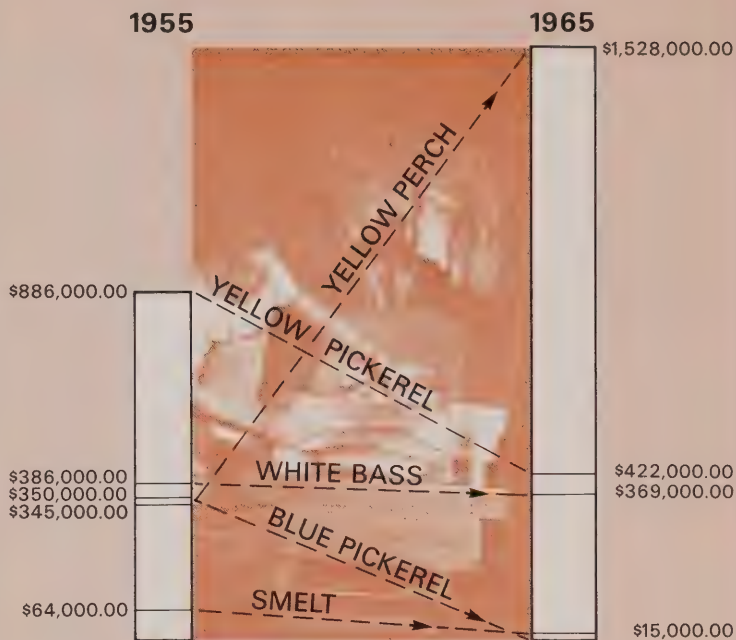
The value of the 18 million lbs. of fish caught off the Lake St. Clair Region in 1965 amounted to \$2.5 million. The major ports of landing were Wheatley, accounting for 6.8 million lbs., 4.7 million lbs. were landed in Kingsville, and 3.3 million lbs. in Erieau and Rondeau Bay.

Oil drilling in Lake Erie near Port Alma.

—Courtesy—Ontario Department of Tourism and Information.



## CHANGES IN PRODUCTION VALUE OF FISH SPECIES LAKE ST. CLAIR REGION



Of the Region's three counties, Kent County was by far the most important both in terms of quantity and value of fish caught, registering a haul of 10.9 million lbs. in 1965 valued at \$1.3 million. Second in importance was Essex County with a catch of 6.4 million lbs. representing a gross value of \$990,000. Lambton County's contribution to the over-all catch is of minor significance, landing only 726 thousand lbs. of fish in 1965 equivalent to \$246,000.

Most of the industry's output in 1965 was accounted for by Yellow Perch (\$1.5 million) and Yellow Pickerel (\$422,000) while White Bass was third in order of importance with \$369,000.

The composition of species caught off the Lake St. Clair Region has altered significantly during the decade with several of the more commercially valuable species such as Pickerel and Smelt declining in importance, while the lower priced Perch has become the predominate species. Nevertheless, in terms of aggregate volume and value of fish caught, there has been little change during the period, indicating that



## MINING, FORESTRY, FISHING AND CONSERVATION

the Region's fishing industry has remained stationary. Moreover, since the value of the industry's output has remained virtually unchanged over the past ten years, it is apparent that in terms of real income, the fishing industry has declined in importance.

### COMMERCIAL FISH PRODUCTION OF IMPORTANT SPECIES, LAKE ST. CLAIR REGION, 1955 AND 1965

| Species         | 1955      |                  | 1965       |                  |
|-----------------|-----------|------------------|------------|------------------|
|                 | lbs.      | \$               | lbs.       | \$               |
| Yellow Perch    | 2,689,000 | 345,000          | 11,902,000 | 1,528,000        |
| Yellow Pickerel | 4,702,000 | 886,000          | 824,000    | 422,000          |
| White Bass      | 3,863,000 | 386,000          | 2,356,000  | 369,000          |
| White Fish      | 186,000   | 107,000          | 150,000    | 85,000           |
| Catfish         | 217,000   | 38,000           | 167,000    | 35,000           |
| Sturgeon        | 23,000    | 27,000           | 15,000     | 18,000           |
| Carp            | 634,000   | 26,000           | 335,000    | 17,000           |
| Smelt           | 1,594,000 | 64,000           | 403,000    | 15,000           |
| Sheepshead      | 672,000   | 10,000           | 922,000    | 14,000           |
| Sunfish         | 34,000    | 4,000            | 48,000     | 11,000           |
| Suckers         | 294,000   | 11,000           | 139,000    | 8,000            |
| Rock Bass       | 15,000    | 2,000            | 35,000     | 7,000            |
| Blue Pickerel   | 2,918,000 | 350,000          | —          | —                |
| Lake Herring    | 108,000   | 31,000           | —          | —                |
| Saugers         | 74,000    | 10,000           | —          | —                |
| Bullhead        | 27,000    | 3,000            | —          | —                |
| <b>Total</b>    |           | <b>2,300,000</b> |            | <b>2,529,000</b> |

Several major independent fishing companies are located in the Region of which Omstead Fisheries Ltd. of Wheatley is the largest, employing approximately 200 people. Others are John Stewart Fisheries of Kingsville providing employment for more than 60 seasonal workers and the Pejay Packing Company of Erieau where 24 people are employed. In addition, independent fishermen operate in the Region while others are affiliated with the two local fishermen's cooperatives established at Rondeau and Kingsville.

In 1965, the fishing industry in the Lake St. Clair Economic Region invested a total of \$3.7 million in vessels, gear and shore installations.

### Forestry

Forestry in the Lake St. Clair Economic Region is of minor importance. Of the Region's total land area (18 million acres), less than 9 per cent is under forest with only 5.7 per cent classified as productive forest land.

It is not surprising, however, that only a negligible portion of the Region's rich fertile land area should be devoted to forestry since the returns from other economic activities, in particular agriculture, are much greater.

On a county basis, Lambton County possesses the largest productive forest area (66,300 acres) while Kent and Essex County have 24,306 and 10,856 acres respectively.

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

In 1963, five of the Region's eighteen sawmills reported lumber production of a magnitude of some 3 million board feet, with elm accounting for almost 50 per cent and maple and oak for 38 per cent, the remaining 12 per cent being accounted for by ash, basswood, beech and others. The relatively large production of elm lumber is partially explained by the high incidence of Dutch Elm disease in the Province, encouraging producers to market this species before it becomes valueless.

| TOTAL LAND AREA AND FORESTED LAND, COUNTIES,<br>LAKE ST. CLAIR REGION |                                |                     |                    |                         |            |
|---|--------------------------------|---------------------|--------------------|-------------------------|------------|
|   | Total<br>Land<br>Area<br>acres | Productive<br>acres | Forested Land<br>% | Non-Productive<br>acres | %          |
| Essex   | 446,696                        | 10,856              | 2.4                | 7,302                   | 1.6        |
| Kent  | 594,374                        | 24,306              | 4.1                | 15,892                  | 2.7        |
| Lambton   | 726,194                        | 66,300              | 9.1                | 24,354                  | 3.4        |
| <b>Total, Region</b>  | <b>1,767,264</b>               | <b>101,462</b>      | <b>5.7</b>         | <b>47,548</b>           | <b>2.7</b> |

The Region's secondary wood industries are relatively insignificant, employing some four hundred workers in 1962 and producing an output valued at approximately \$4 million. Similarly, the furniture and fixtures industry employed less than two hundred people with an output of \$3.2 million.

### Conservation

Of the Lake St. Clair Region's three conservation authorities, the Ausable River Authority is the oldest, having been established in 1946, while Sydenham Valley Authority and the Lower Thames Valley Authority did not come into existence before the early 1960's.

The Region's conservation authorities play an important role in the economic development of the Region, being responsible for flood control, soil conservation and land use, forest conservation, water pollution, wild life, recreation, and the preservation of historical sites.

In the past, the conservation authorities have mainly been engaged in flood control. Flood control dams, reservoirs and dikes have been constructed and maintained by the authorities in an effort to prevent severe devastating flooding. In addition, the conservation authorities have implemented a number of forest conservation measures. New trees have been planted, while at the same time, steps have been taken to preserve the existing forest.

Recently, the Region's conservation authorities have been increasingly concerned with providing recreation facilities for the area, and efforts are being made to halt the threat presented by the pollution of the Lake St. Clair Region's waters.



R  
GION

Electric Power  
and utilities or



Source: Hydro-Electric Power Commission of Ontario

# ENERGY

## Electricity

There were seven thermal electric power generating stations in the Region in 1966 with a combined capacity of slightly less than 450,000 kilowatts. Two stations operated by The Hydro-Electric Power Commission of Ontario (HEPCO), representing 75 per cent of total regional capacity, supplied some 65 per cent of total power output while five privately-owned stations accounted for the balance.

Hydro's J. Clark Keith Generating Station, located in Windsor, has a capacity of 264,000 kilowatts. Together with an oil-fired gas turbine station in Sarnia with a stand-by capacity of 62,640 kilowatts, it generates an electricity flow equivalent to approximately 24 per cent of the Commission's total sales in the Region. However, as HEPCO's power output in Southern Ontario is fed into a grid, the actual contribution of these stations to the Region's over-all power supply varies.

The privately-owned stations are operated by Allied Chemical Canada Limited (Amherstburg), Canada and Dominion Sugar Company Limited (Chatham), Polymer Corporation Limited (Sarnia), Hiram Walker and Sons Limited (Windsor) and Ford Motor Company of Canada Limited (Windsor). The power generated by these stations is used exclusively for company purposes.

While at the present time the Region accounts for less than five per cent of the Province's total generating capacity, its relative share will increase appreciably in the future, as the Ontario Hydro Power Commission is now constructing a thermal power plant in the Town of Courtright, 14 miles south of Sarnia. Scheduled for completion in 1970 at an estimated cost of \$220 million, this station will have four 500,000 kilowatt turbo-generators with a total capacity equivalent to the combined peak requirements of Metropolitan Toronto, London and Ottawa.

In 1966, the Commission sold 3,244.9 million kilowatt hours of electric energy in the Region valued at \$31.9 million thus accounting for approximately seven per cent of the Commission's total sales and revenue.



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

Since 1951 industrial power consumption in the Region rose from 56 per cent to 66 per cent of the Commission's total sales while the relative shares of residential, farm and commercial consumption declined from 25 per cent to 19 per cent, from 6 per cent to 4 per cent and from 12 per cent to 10 per cent, respectively. Street lighting accounted for about 1 per cent of total power requirements throughout the period under review.

### Oil

Petroleum has played an important role in the economic life of the Region since 1857, when North America's first commercial oil well went into production in Enniskillen Township, Lambton County. The Region's importance as an oil producer during these early years is illustrated by the fact that throughout the latter part of the nineteenth century the Town of Petrolia, south-east of Sarnia, was known as the Oil Capital of Canada. Although the Region has since lost its leading position in national crude oil production to Western Canada and now accounts for less than one per cent of Canada's total annual output, it continues, nevertheless, to derive considerable benefit from this industry.

In 1966, the Lake St. Clair Region's total cumulative oil production since 1857 reached 36,400,400 barrels. Lambton's share amounted to 83 per cent, while the corresponding figures for Kent and Essex were 15 and 2 respectively.

There were 856 producing wells located in the Region in 1965, 409 fewer than in 1951. Their combined output of 637,562 barrels was valued at \$2.0 million, representing increases of 262 per cent and 296 per cent, respectively, over 1951. Despite these gains the Region's share in Ontario's total oil production declined during the period from 89 per cent to 50 per cent.

Lambton County's 773 wells accounted for 72 per cent of the Region's petroleum output in 1965. Although this was 189 per cent above the level attained in 1951, it was 8 per cent below the 1961 total.

Approximately one-fifth of the crude oil produced in the Region in 1965 came from the 72 active wells located in Kent County. The Clearville Oil Field, discovered in 1962, accounts for 89 per cent of the total regional crude oil output.

Although Essex County's crude oil output in 1965 was equivalent to only 6 per cent of the regional total it was, nevertheless, 287 times larger than in 1954 due to the discovery of several new fields during the period.

Estimates prepared by the Department of Energy and Resources Management place Lambton's oil reserves at some 3.9 million barrels, while available oil supply from Kent and Essex Counties is estimated at 938,000 barrels and 126,600 barrels respectively.

Although Sarnia originally became a refining centre because of its proximity to regional oil fields, it would never have attained its present

# GAS AND OIL FIELDS LAKE ST. CLAIR REGION

- Gas fields
- Oil fields
- Gas fields used for storage





## ENERGY

level of development if it had not been able to draw upon other sources of supply. Prior to the completion of the Inter-provincial Pipeline from Edmonton to Superior, Wisconsin in 1951, foreign producers, chiefly American, supplied the major portion of its crude oil requirements. Since then, however, the oil fields of Western Canada became progressively more important. The extension of the pipeline from Superior to Sarnia in 1954 reinforced this trend, as did the adoption of the National Oil Policy in 1961. As a result, Canada's Western Provinces now account for well over 90 per cent of the crude oil processed in the Sarnia area.

### **Natural Gas Production**

Reflecting the close physical association of natural gas with the location of oil wells, the Region also produces considerable quantities of gas fuel. From 1889, the year of the initial discovery of oil in Essex County, to the end of 1965, approximately 458 billion cubic feet of natural gas were extracted from the Region's oil wells. Sixty-seven per cent of this total was produced in Kent County, while the Counties of Lambton and Essex accounted for 28 per cent and 5 per cent, respectively.

The 357 active wells located in the Region in 1965 yielded 9.1 billion cubic feet of natural gas valued at \$3.5 million. Lambton County's 57 producing wells accounted for approximately 65 per cent of the Region's 1965 gas output. This was almost two and one-half times more than was produced in 1951—a fact which serves to illustrate the importance of the contribution made by Dawn 156, the Province's most productive gas field.

There were 290 producing fields in Kent County in 1965 with a combined output equivalent to 35 per cent of the Regional total, while Essex County's 10 active gas wells accounted for less than one per cent of the Region's 1965 gas output.

The Department of Energy and Resources Management estimates that an additional 122 billion cubic feet of natural gas can be produced in the Region before its reserves are exhausted. Lambton's share of this total will amount to roughly 53 per cent, while Kent will account for virtually all of the balance.

### **Processing**

The three natural gas processing plants located in the Lake St. Clair Region are the only establishments of this type in the Province. The largest of these is located in Port Alma, Kent County and is operated by the Union Gas Company of Canada Limited. Capable of processing 16 million cubic feet of raw gas every day, this plant is presently being utilized for the removal of acid gas. Both of the remaining plants are operated by Imperial Oil Limited in Corunna, Lambton County. With a combined daily raw gas capacity of 5 million cubic feet, they are engaged in the removal of liquid hydro-carbons.

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

### Distribution

Union Gas Company of Canada Limited is the sole distributor of natural gas in the Lake St. Clair Region but is also engaged in the production, storage and transmission of natural gas.

Although Union operates its own wells in the Region and purchases a considerable volume of natural gas from other local producers, it now obtains most of its gas supply from Western Canada by means of the Trans Canada Pipeline. In addition, the Panhandle Eastern Pipeline Company supplies it with comparatively small quantities of gas produced in the southern United States.

Western gas is delivered to the Union transmission network at a point near Oakville and is then transmitted over a 142 mile, 26 inch pipeline to the Company's storage fields in Dawn Township, Lambton County. It is the Company's intention to eventually "twin" this line with a 34 inch pipeline, the western half of which is already completed and in service. Market conditions will determine the pace at which the pipeline is extended eastwards.

Trans Canada recently obtained permission from the American Federal Power Commission to construct a 1,000 mile, 36 inch pipeline from Emerson, Manitoba via the United States to Sarnia which is scheduled for completion in 1968.

Conveyed into this country by a series of pipelines crossing the Detroit River at Ojibway, American gas is delivered to the Company's Dawn Township storage fields by means of a 66 mile, 16 inch pipeline. The terms of Union's contract with Panhandle Eastern insure that gas from this source will be available to the Company until 1976.

Union's storage facilities are worthy of special mention since they constitute perhaps the most unique feature of the Company's operations. Their singularity stems from the fact that they include, in addition to smaller conventional installations in Windsor and Sarnia, six formerly productive gas pools with a combined storage capacity of 76.4 billion cubic feet. Situated in Lambton County, these pools are of considerable advantage to the Company since they enable it to store a large proportion of the gas delivered by its suppliers during the off-peak summer months, thereby guaranteeing its ability to cope with the sharp increase in demand which takes place with the onset of cool weather.

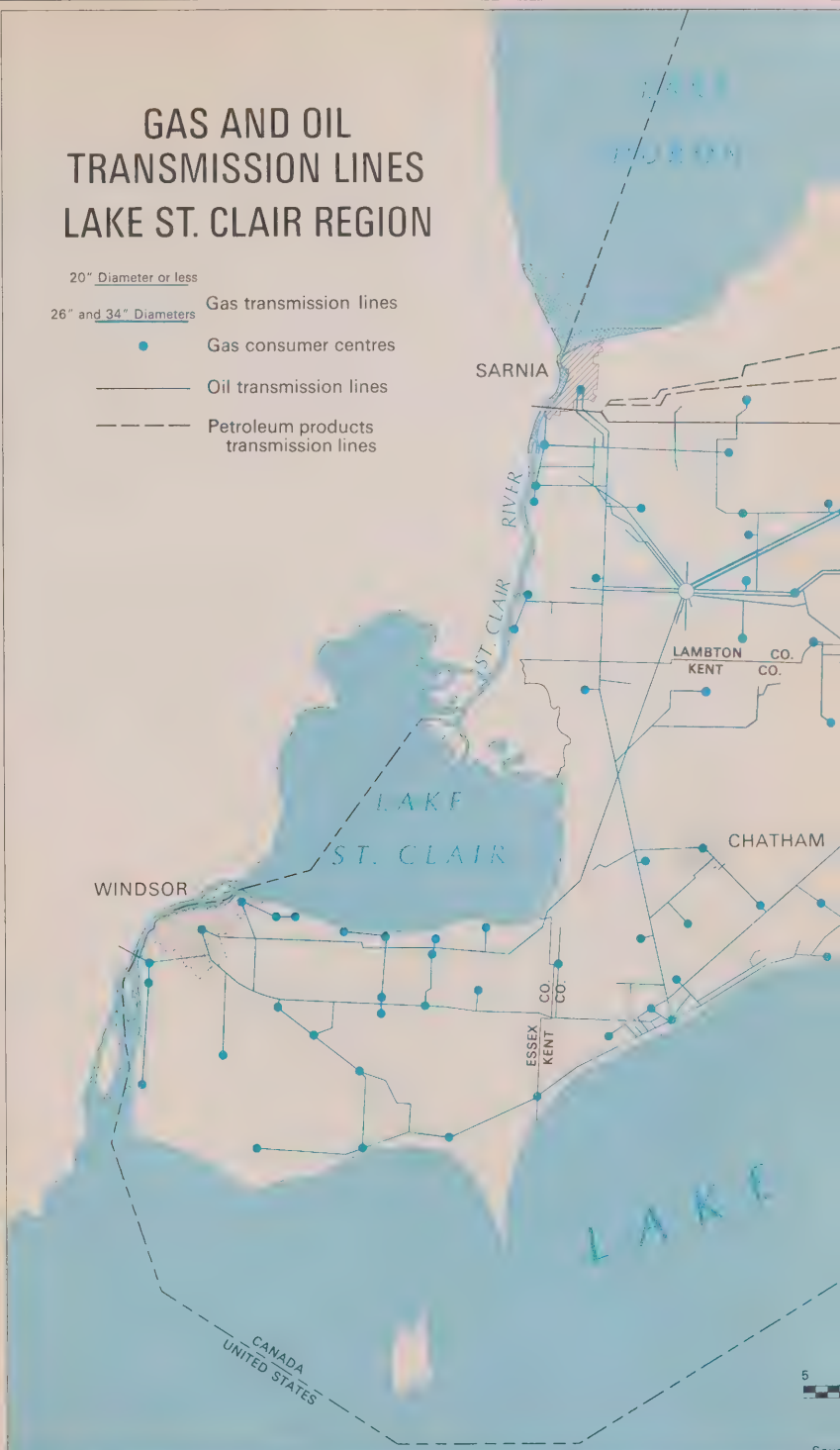
Forty-four widely-scattered cities, towns and villages in the Region are now served by Union's distribution system. On March 31, 1965, the Company had 105,175 customers in the Region, 13 per cent more than on the same date in 1960. Windsor, Sarnia and Chatham accounted for roughly one-half of this total, their individual shares amounting to approximately one-quarter, one-eighth and one-twelfth, respectively.

On average slightly less than ninety-one per cent of the Company's customers in the Region fall into the residential category while the relative shares of commercial and industrial users amount to about eight per



# GAS AND OIL TRANSMISSION LINES LAKE ST. CLAIR REGION

- 20" Diameter or less  
26" and 34" Diameters
- Gas transmission lines
  - Gas consumer centres
  - Oil transmission lines
  - Petroleum products transmission lines





## ENERGY

cent and one per cent, respectively.

### Energy Projections

Reflecting the expansion in economic activity in the Region, demand for natural gas is expected to increase from 20.3 billion cubic feet in 1965 to some 42.7 billion cubic feet by 1976, equivalent to a growth of 7.00 per cent per annum. Most of the growth is likely to take place in the industrial and commercial sectors accompanied by a relative decline in the residential consumption of gas.

| <b>NATURAL GAS CONSUMPTION,<br/>LAKE ST. CLAIR REGION, 1960-1965 AND 1976</b> |                       |                  |                       |
|---|-----------------------|------------------|-----------------------|
| Year  | Billion<br>Cubic Feet | Year             | Billion<br>Cubic Feet |
| 1960  | 14.2                  | 1964             | 18.0                  |
| 1961  | 14.6                  | 1965             | 20.3                  |
| 1962  | 16.7                  | 1976 (estimated) | 42.7                  |
| 1963  | 18.5                  |                  |                       |

Based on recent trends, demand for electric energy will increase from 3,200 million kilowatt hours in 1965 to some 6,700 kilowatt hours of electricity by 1976 representing an annual average growth of 7.00 per cent during the forecast period. Industrial consumption of electric

| <b>ELECTRIC ENERGY CONSUMPTION,<br/>LAKE ST. CLAIR REGION, 1951, 1961-1965 AND 1976</b> |                |                  |                |
|---|----------------|------------------|----------------|
| Year  | Million<br>KWH | Year             | Million<br>KWH |
| 1951  | 1,154.5        | 1964             | 2,759.9        |
| 1961  | 2,431.0        | 1965             | 3,200.0        |
| 1962  | 2,520.4        | 1976 (estimated) | 6,700.0        |
| 1963  | 2,768.9        |                  |                |

energy including privately-owned stations will account for approximately 66 per cent to 70 per cent of the regional total in 1976, while the respective shares of the domestic and commercial sectors are expected to show only relatively minor changes.

## MANUFACTURING

The diversity of natural resources and an advantageous geographical location have been the major factors generating industrial growth in the St. Clair Region. The excellent soils and favourable climate yield a wide range of agricultural products for processing while the deposits of crude oil initiated the development of an extensive petrochemical industry. In addition, a large complex of automobile and transportation equipment industries has been attracted to the Region as well as other industries producing a broad range of products including machinery, building materials, clothing, furniture and electrical and glass products. Industrial growth has also been stimulated by the Region's strategic location on the crossroads of an extensive network of rail, road and water routes while its proximity to the United States has facilitated access to technical skills, raw materials and concentrated markets.

A total of 799 manufacturing establishments were located in the St. Clair Region in 1962, with annual shipments valued at over \$1,258 million representing 9.4 per cent of Ontario's manufacturing output. Approximately 43,250 persons are employed by the Region's manufacturing plants.

Although a wide range of industries is located within the Region, four industrial groups account for 83 per cent of the regional manufacturing output and 70 per cent of the industrial employment. Of the four, the transportation equipment industry group comprises the largest portion, accounting for 28 per cent of the Region's manufacturing output in 1962 and providing jobs to almost one-third of the industrial work force. The petroleum and coal products group ranks second in terms of output, with 20 per cent of the regional total; however, being highly capital-intensive, it employs only 14 per cent of the manufacturing workers. The food and beverages group accounts for almost one-fifth of the output and the same proportion of workers, while the chemical and chemical products group accounts for 16 per cent of the output and 14 per cent of the industrial employment.

These four groups also comprise a large part of the total Ontario production in their respective categories. The Region's petroleum and

## MANUFACTURING

coal products industries comprised 60 per cent of the Provincial total in 1962, the chemical and chemical products accounted for 19 per cent, and the transportation equipment and the food and beverages represented 17 and 10 per cent respectively.

| <b>MAJOR INDUSTRY GROUPS,<br/>LAKE ST. CLAIR REGION, 1962</b> |                            |                  |                |                                    |  |                |                 |
|---|----------------------------|------------------|----------------|------------------------------------|--|----------------|-----------------|
|   | Establish-<br>ments<br>No. | Employees<br>No. | % of<br>Region | Salaries<br>and Wages<br>(\$000's) | Value of<br>Factory Shipments<br>(\$000's) | % of<br>Region | % of<br>Ontario |
| Transportation Equipment                                      | 46                         | 13,840           | 32             | 80,367                             | 347,849                                    | 28             | 17              |
| Petroleum & Coal Products                                     | 3                          | 1,894            | 4              | 12,011                             | 253,454                                    | 20             | 60              |
| Foods & Beverages   | 204                        | 8,742            | 20             | 35,956                             | 242,170                                    | 19             | 10              |
| Chemical & Chem. Prods.                                       | 42                         | 5,937            | 14             | 35,937                             | 204,199                                    | 16             | 19              |
| Metal Fabricating   | 146                        | 4,802            | 11             | 23,527                             | 73,792                                     | 6              | 7               |
| <b>Total, Region</b>  | <b>799</b>                 | <b>43,251</b>    | <b>100</b>     | <b>220,655</b>                     | <b>1,258,706</b>                           | <b>100</b>     | <b>100</b>      |

The growth of the Region's manufacturing output during the period 1957 to 1962 lagged behind the Ontario average. In 1958, a decline in the output of the automotive and transportation equipment industry due to the recessionary conditions prevailing throughout Canada at the time and a decrease in demand had significant repercussions throughout the Region's economy. Manufacturing output decreased 6.5 per cent from \$1,204 million in 1957 to \$1,126 million in 1958. Since 1958, there has been an upward trend with total output increasing 11.7 per cent in 1962 over the 1958 level. In comparison, Ontario's output increased 26.1 per cent over the same period.

Reviewing specific industry groups in the Region during the period 1957 to 1962, it is evident that while the output of the transportation equipment industry, primary metal, machinery and metal fabricating industries declined from the 1957 level, the other industries showed substantial increases in output. The most notable increases were achieved by the manufacturers of tobacco products and furniture with output up 63 per cent and 41 per cent respectively. Substantial increases were also attained by major groups such as food and beverages, chemical, and the petroleum and coal products industries whose output rose by 39 per cent, 33 per cent and 26 per cent respectively.

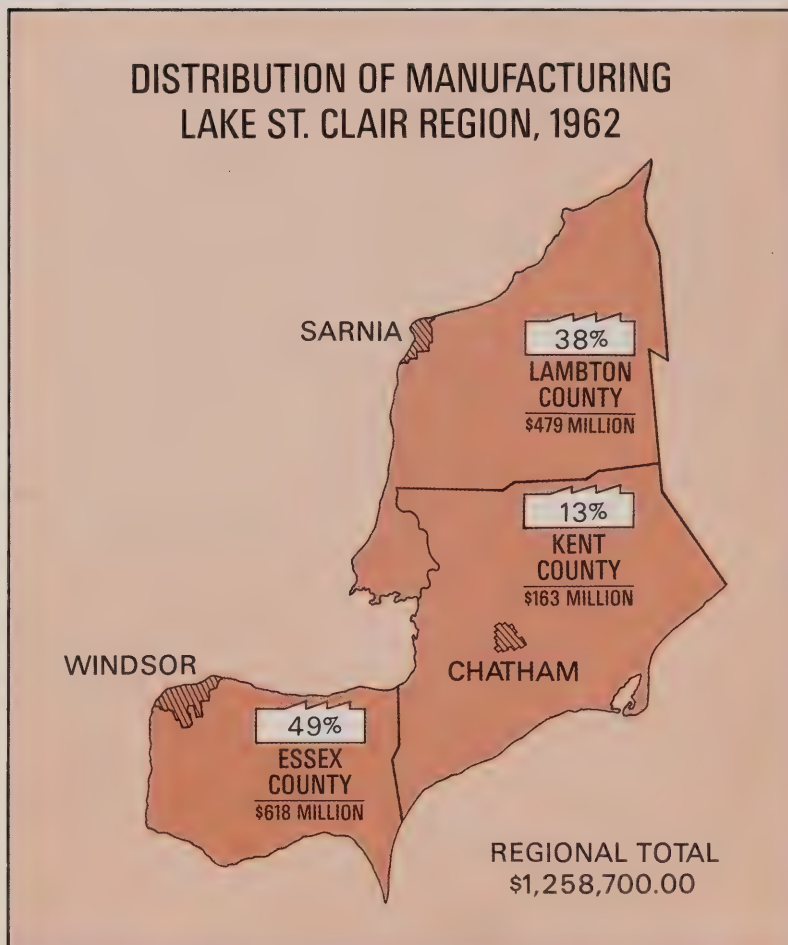
It is significant to note that the automotive and transportation equipment industry resumed its growth after 1958 with output increasing 16 per cent over the 1958 level by 1962. Similarly, production of machinery rose by 28 per cent accompanied by an 11 per cent increase in the output of the metal fabricating industry and a 5 per cent increase in the production of the primary metals industry.

The Canada-United States Automotive Free Trade Agreement, effective since January, 1965, has greatly stimulated the transportation equipment industry and the industries supplying this group with parts



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

and materials in the St. Clair Region. During the last two years, considerable reorganization and plant expansion has occurred in the Region's automotive plants and in addition, capacity has been substantially expanded in the industries producing fabricated metal products, steel,



rubber, textiles, plastic and glass products. A survey conducted by the Trade and Industry Branch of the Ontario Department of Economics and Development indicated that during the two years in which the Agreement has been in effect, new investment in plant and facilities for the production of automobiles, transportation equipment and parts amounted to \$154 million which created 4,300 new jobs.

## MANUFACTURING

### Geographical Distribution of Manufacturing

Essex and Lambton are the more heavily industrialized counties in the Region. Together they account for 87 per cent of the Region's manufacturing output and provide jobs to 84 per cent of the industrial work force. In 1962, Essex had 484 plants producing an output valued at \$618 million, or 49 per cent of the regional total and Lambton, with 126 plants, accounted for \$479 million or 38 per cent. In comparison, there were 189 manufacturing establishments in Kent with shipments of \$163 million equivalent to 13 per cent of the regional total.

Essex County employs a much larger proportion of people than is suggested by its value of manufacturing output. In 1962, approximately 62 per cent of the Region's industrial work force were employed in Essex compared with 22 per cent in Lambton and 16 per cent in Kent.

| MANUFACTURING, LAKE ST. CLAIR REGION<br>BY COUNTY, 1962 |                             |            |                   |            |                               |            |  |            |
|---|-----------------------------|------------|-------------------|------------|-------------------------------|------------|--|------------|
|   | Establish-<br>ments<br>% of |            | Employees<br>% of |            | Salaries<br>and Wages<br>% of |            | Value<br>of Factory<br>Shipments<br>% of |            |
|   | No.                         | Region     | No.               | Region     | (\$000's)                     | Region     | (\$000's)                                | Region     |
| Essex   | 484                         | 60         | 26,758            | 62         | 137,692                       | 62         | 617,644                                  | 49         |
| Kent  | 189                         | 24         | 7,000             | 16         | 28,822                        | 13         | 162,544                                  | 13         |
| Lambton   | 126                         | 16         | 9,493             | 22         | 54,141                        | 25         | 478,518                                  | 38         |
| <b>Total, Region</b>                                    | <b>799</b>                  | <b>100</b> | <b>43,251</b>     | <b>100</b> | <b>220,655</b>                | <b>100</b> | <b>1,258,706</b>                         | <b>100</b> |

Three centres—Windsor, Leamington and Amherstburg—account for 88 per cent of the manufacturing output in Essex. Having two-thirds of the County's plants, they provide jobs for 86 per cent of the industrial work force. Of the three manufacturing centres, the Greater Windsor area is the most significant with its extensive automotive and transportation equipment industry, metal fabricating plants and foundries. In 1962, the manufacturing output of the Greater Windsor area was valued at \$464 million or 75 per cent of the County total and industrial employees numbered 20,000 persons or 75 per cent. The relatively higher wage rates paid to the skilled labour in the automotive and related industries is

| MANUFACTURING IN ESSEX COUNTY<br>BY MAJOR CENTRES, 1962 |                             |            |                   |            |                               |            |  |            |
|---|-----------------------------|------------|-------------------|------------|-------------------------------|------------|--|------------|
|   | Establish-<br>ments<br>% of |            | Employees<br>% of |            | Salaries<br>and Wages<br>% of |            | Value<br>of Factory<br>Shipments<br>% of |            |
|   | No.                         | County     | No.               | County     | (\$000's)                     | County     | (\$000's)                                | County     |
| Windsor   | 289                         | 60         | 20,076            | 75         | 109,732                       | 80         | 463,773                                  | 75         |
| Leamington  | 20                          | 4          | 2,298             | 9          | 9,443                         | 7          | 53,485                                   | 9          |
| Amherstburg   | 11                          | 2          | 636               | 2          | 2,796                         | 2          | 21,786                                   | 4          |
| <b>Total,<br/>Essex County</b>                          | <b>484</b>                  | <b>100</b> | <b>26,758</b>     | <b>100</b> | <b>137,692</b>                | <b>100</b> | <b>617,644</b>                           | <b>100</b> |

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

reflected in the fact that 80 per cent of the total Essex manufacturing payroll was earned by employees in Windsor.

Leamington and Amherstburg, noted primarily for food and beverage manufacturing, produced 9 per cent and 4 per cent respectively, of the County's manufacturing output.

Lambton's dominant centre is Sarnia, noted for its heavy concentration of petrochemical plants. Sarnia has 49 manufacturing establishments representing 39 per cent of Lambton's total, however, their manufacturing was valued at \$369 million, or 77 per cent of the County total. Sarnia employed 73 per cent of Lambton's industrial work force earning 78 per cent of the County's total manufacturing payroll.

| MANUFACTURING IN SARNIA, 1962    |                         |            |                   |            |                               |            |  |            |
|----------------------------------|-------------------------|------------|-------------------|------------|-------------------------------|------------|--|------------|
|                                  | Establish-ments<br>% of |            | Employees<br>% of |            | Salaries<br>and Wages<br>% of |            | Value<br>of Factory<br>Shipments<br>% of |            |
|                                  | No.                     | County     | No.               | County     | (\$000's)                     | County     | (\$000's)                                | County     |
| Sarnia                           | 49                      | 39         | 6,953             | 73         | 42,231                        | 78         | 368,798                                  | 77         |
| <b>Total,<br/>Lambton County</b> | <b>126</b>              | <b>100</b> | <b>9,493</b>      | <b>100</b> | <b>54,141</b>                 | <b>100</b> | <b>478,518</b>                           | <b>100</b> |

Kent's major manufacturing centres are Chatham and Wallaceburg. Chatham has 80 plants producing a diversity of commodities including food products, automotive parts and transportation and agricultural equipment. Wallaceburg has 30 plants producing food, glass and metal products. Chatham's manufacturing output of \$108 million, in 1962, represented 66 per cent of the County total. In comparison, Wallaceburg's production was valued at \$27 million or 16 per cent.

Approximately 49 per cent of the industrial work force in Kent is employed in Chatham and 28 per cent in Wallaceburg. In the two centres combined, the industrial workers earned 81 per cent of all the wages and salaries paid in Kent County during 1962.

| MANUFACTURING IN KENT COUNTY<br>BY MAJOR CENTRES, 1962 |                         |            |                   |            |                               |            |  |            |
|--|-------------------------|------------|-------------------|------------|-------------------------------|------------|--|------------|
|  | Establish-ments<br>% of |            | Employees<br>% of |            | Salaries<br>and Wages<br>% of |            | Value<br>of Factory<br>Shipments<br>% of |            |
|  | No.                     | County     | No.               | County     | (\$000's)                     | County     | (\$000's)                                | County     |
| Chatham  | 80                      | 42         | 3,407             | 49         | 15,657                        | 54         | 108,012                                  | 66         |
| Wallaceburg  | 30                      | 16         | 1,933             | 28         | 7,845                         | 27         | 26,677                                   | 16         |
| <b>Total,<br/>Kent County</b>                          | <b>189</b>              | <b>100</b> | <b>7,000</b>      | <b>100</b> | <b>28,822</b>                 | <b>100</b> | <b>162,544</b>                           | <b>100</b> |

In summary, the manufacturing industries in the Lake St. Clair Region are concentrated in three major centres—Windsor, Sarnia and Chatham. Together, these cities provided industrial jobs for more than 30,000 persons in 1962, more than 70 per cent of the total manufacturing employment in the Region. The manufacturing output of these three

## MANUFACTURING

centres was valued at \$941 million or 75 per cent of the regional total. Of this total, Windsor's production represented 37 per cent, while the manufacturing output of Sarnia and Chatham constituted 29 per cent and 9 per cent respectively.

There are also three comparatively smaller manufacturing centres in the Region—Leamington, Wallaceburg and Amherstburg. In 1962, Leamington produced 4 per cent of the Region's manufacturing output while Wallaceburg and Amherstburg each accounted for 2 per cent.

### The Major Industries

The **automotive and transportation equipment industry** comprises the largest industrial group in the St. Clair Region, accounting for 28 per cent of the total value of manufacturing output and providing jobs to 32 per cent of the Region's industrial work force. In 1962, there were 46 establishments manufacturing automobiles and transportation equipment in the Region. They employed 13,840 workers, paid over \$80 million in salaries and wages and their output was valued at \$348 million. Most of these firms are based in Essex and concentrated around the Greater Windsor area. A smaller number are located in Kent, in the Cities of Chatham and Wallaceburg.

It is significant to note that more than 95 per cent of the Canadian automotive industry is concentrated in the Province of Ontario, with a substantial proportion located in the Lake St. Clair Region. Historically,

**An automobile assembly line in Windsor.**

*—Courtesy—Ontario Department of Tourism and Information.*





## LAKE ST. CLAIR REGION ECONOMIC SURVEY

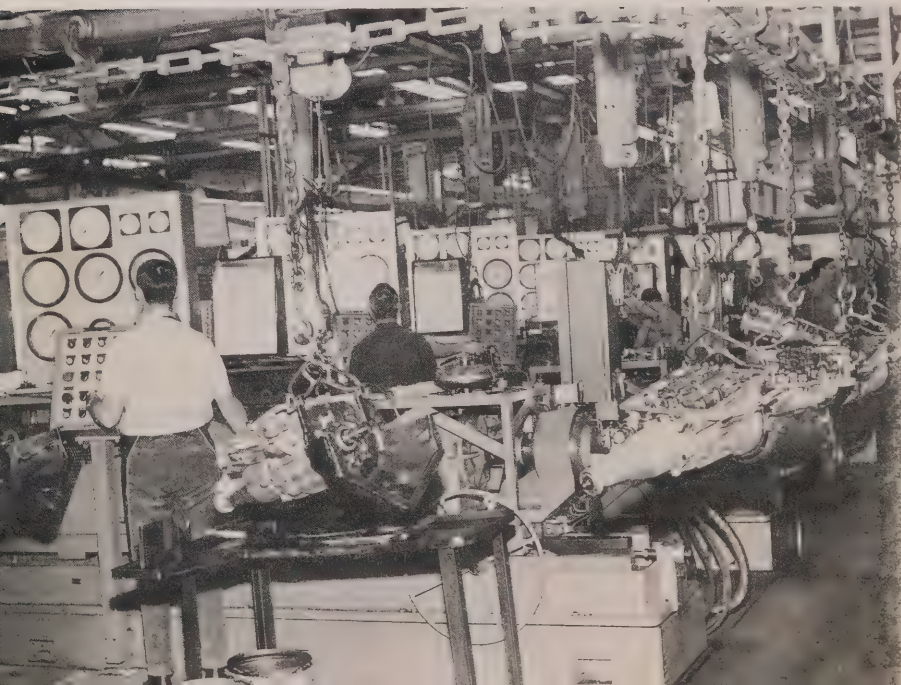
this Region played an important role in the development of the automotive industry in Canada. Canada's very first automotive plant was established in Windsor, in 1904, by a few Canadian businessmen who obtained the rights to produce and distribute Fords throughout the British Empire, outside of the United Kingdom. In 1909, Everett-Metzger-Flanders became established at Walkerville, subsequently becoming Studebaker in 1911. The International Harvester Co. of Canada Ltd., agricultural implement producers, took over the Chatham Wagon Works in 1911 and produced the first truck in Chatham in 1920.

The St. Clair Region and in particular, the Greater Windsor area, is noted for its manufacture and assembling of cars, trucks and jeeps, and for the manufacture of automotive parts such as spark plugs, spring seats, brakes, electric lamps and other products. In addition, there is a substantial number of firms in the Region, not classed as part of the automotive industry but which supplies this industry with forgings, fabricated steel products, plastics, and other products.

The three big automotive concerns—Chrysler, Ford and General Motors—are located in the Greater Windsor area. **Chrysler Canada Ltd.** is the Region's largest industrial employer. Located on almost 2½ million square feet of plant space, this firm produces motor cars, trucks and engines. **Ford Motor Co. of Canada Ltd.** produces engines and standard transmissions. **McKinnon Industries Ltd.** a subsidiary of General Motors

Testing of automatic transmissions under simulated driving conditions at the Windsor plant of McKinnon Industries Ltd.

—Courtesy—McKinnon Industries Ltd.





## MANUFACTURING

and Windsor's third largest employer, produces both automatic and standard transmissions.

In Windsor is also located the **Canadian Motor Lamp Co. Ltd.** manufacturing wheel covers, hub caps, head-lamps and various stampings. The **Champion Spark Plug Co. of Canada Ltd.**, a subsidiary of the Ohio parent company, and part of a world-wide organization, makes spark plugs. **Bendix-Eclipse of Canada Limited** produces starter drives, brakes, hydraulic master and wheel cylinders, and other automotive service products.

The Greater Windsor area has about 165 companies which are related to the automotive industry. Approximately 60 per cent of all the automotive and transportation equipment companies are independent Canadian operations. In 1965, about 63 per cent of Windsor's industrial work force was employed in the automotive and transportation equipment and related industries.

In Amherstburg, **SKD Manufacturing Co. Ltd.** produces parts and metal stampings for the automotive industry and agricultural implements.

In Kent County, Chatham is the location of the **International Harvester Co. of Canada Ltd.** which produces motor trucks and **Ontario Steel Products Co. Ltd.**, manufacturer of automotive bumpers, springs and torsion bars.

The employees in most of the automotive and transportation equipment industries are highly skilled. Training programmes have been instituted by many of the firms. Recruitment is from the vocational schools in the area, including the Western Ontario Institute of Technology, a new educational institution located in Windsor. The companies draw on the University of Windsor and other universities to fill their growing requirements for technical and management personnel.

The wages in the automotive and transportation equipment industries are relatively high. This is reflected in the fact that Windsor ranked fourth highest in a comparison of average income among personal income taxpayers in Canadian cities in 1963.

The automotive and transportation equipment industry exports to the United Kingdom, the United States, Germany, France, Brazil, South Africa and Australia. The volume of exports varies as to firm and type of products but the markets are growing in all these areas except in Australia and South Africa where recent legislation has been passed to encourage a domestic automotive and transportation equipment industry.

The growth of the Region's automotive and transportation equipment industry slackened during 1958 concomitant with national trends in this industry. Among the contributing factors were the recessionary economic conditions prevailing throughout Canada at the time, the decrease in national automobile sales, the rising demand for European car imports, and plant consolidations and reorganizations. However, since 1958, there has been an upward trend with manufacturing output increasing

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

16 per cent by 1962 over the 1958 value. As a result of new technology and increased automation, employment in this industry has decreased since 1958 at an average of about one and one-half per cent per year.

### THE AUTOMOTIVE AND TRANSPORTATION EQUIPMENT INDUSTRIES LAKE ST. CLAIR REGION, 1962

| Year | Establish-<br>ments<br>No. | Employees<br>No. | Salaries<br>and Wages<br>(\$000's) | Fuel and<br>Electricity<br>(\$000's) | Cost of<br>Materials<br>Used<br>(\$000's) | Total of<br>Major Cost<br>Factors*<br>(\$000's) | Selling Value<br>of Factory<br>Shipments<br>(\$000's) |
|------|----------------------------|------------------|------------------------------------|--------------------------------------|---|---|---|
| 1957 | 43                         | 20,868           | 88,994                             | 4,017                                | 263,953                                   | 356,963   | 407,675   |
| 1958 | 43                         | 14,902           | 73,034                             | 3,438                                | 187,863                                   | 264,335   | 299,106   |
| 1959 | 42                         | 16,266           | 85,386                             | 3,908                                | 196,666                                   | 285,960   | 331,801   |
| 1960 | 44                         | 15,005           | 80,737                             | 3,800                                | 215,458                                   | 299,996   | 346,363   |
| 1961 | 43                         | 14,184           | 77,721                             | 3,826                                | 192,313                                   | 273,860   | 308,286   |
| 1962 | 46                         | 13,840           | 80,367                             | 3,888                                | 221,561                                   | 305,816   | 347,849   |

\*Salaries and wages, fuel cost and materials used.

In more recent years, the growth of the automotive and transportation equipment industry in the Region has been accelerated by the effects of the Automotive Free Trade Agreement signed between Canada and the United States. When this Agreement became effective in January 1965, it was anticipated that it would encourage Canadian producers of automobiles and parts to specialize and achieve greater efficiency and lower unit costs and as a consequence, to expand their output by one-third over the 1964 level by 1968 and secure an additional 3½ per cent of the North American market.

In the St. Clair Region, a survey undertaken by the Trade and Industry Branch of the Ontario Department of Economics and Development indicated that in the two years following the Agreement, new investment in plant and facilities for the production of automobiles, transportation equipment and parts amounted to \$154 million and represented one-third of the comparable total Provincial investment. As a direct consequence, approximately 4,300 new jobs were created in the Region. There has also been considerable plant reorganization and modernization in response to the changing structure of the market.

Among the modernization projects is the new General Motors' \$20 million automotive trim plant in Windsor, the most modern of its kind in the world, employing a staff of 1,750. The Ford Motor Co. of Canada in Windsor made changes during 1965 in its high volume transmission chassis production involving an investment of \$2 million. In addition, adjustments were made to include high speed casting and the production of a new series of engines. Chrysler Canada Ltd. has made additions to its plant capacity for expanding its passenger car and truck facilities in Windsor involving \$12 million.

The expansion in the automotive and transportation equipment group has had repercussions on the industries supplying it with parts and

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materials. Plant capacity has been expanded in the industries producing steel, fabricated metal products, rubber, textiles, plastics and glass products. SKD Manufacturing Co. Ltd., producer of parts and metal stampings in Amherstburg, spent more than one-half million dollars in 1965 installing two presses and constructing another building. The Kelsey Wheel Co. Ltd., an established producer of wheels and pins for automobiles and trucks for over 50 years, completed an expansion programme valued at \$5 million in 1965. In addition, Polymer Corporation Limited in Sarnia and Canadian Industries Limited, have announced large expansions of their plastics divisions. Purchases and intentions to buy land in Chatham were announced by two American companies working in the automotive field.

In general, it is expected that as a result of the Automotive Free Trade Agreement, plants in the automotive and transportation equipment group will specialize and expand their markets. However, some companies, particularly the smaller manufacturers of parts, may suffer in the face of import competition from larger and more efficient United States plants, unless they are able to diversify their markets and supply industries outside the automobile assemblers.

An important consequence of the Automotive Free Trade Agreement has been the improvement of Windsor's advantageous position on the Canada-United States border. In 1965, Windsor was officially designated part of the Detroit commercial area and trucks no longer have to pay international trucking fees between the two cities. As a result, access from Windsor to the markets in Detroit and other points in the United States has been greatly facilitated.

The **petroleum industry** in the Lake St. Clair Region is concentrated in Lambton County. This was the site of North America's first commercially significant oil field, in 1857, and Canada's first commercial oil refinery. During the succeeding years, the pace of development was so rapid that by 1864, the Petrolia-Oil Springs area alone could boast of hundreds of producing wells and at least 15 refineries. These refineries were utilized for the production of lamp oil and asphalt, since a commercial application had not been developed, as yet, for gasoline.

Sarnia, which had previously derived very little benefit from this development, began to feel its full impact in 1897, when the **Imperial Oil Company Limited** (now Imperial Oil Ltd.), having purchased a refinery built twenty-six years earlier by the Dominion of Canada Oils Refinery Company Limited, transferred its refining operations to Sarnia from Petrolia. During the next thirteen years — a period which witnessed the introduction of the automobile — the plant's crude run increased by 587 per cent, finally attaining over 2,400 barrels per day. This, together with the through-put of the refinery operated by the **Canadian Oil Company Limited** in Petrolia, made Lambton County the foremost petroleum refining centre in the Province.

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

The industry expanded at an impressive pace during the interwar years, due to the phenomenal increase which took place in the demand for gasoline. Towards the end of this period, however, the Region received a new impetus as techniques were developed for the extraction and commercial utilization of the chemical constituents of crude oil. From the Region's standpoint, the importance of this development was not only the resulting increase in the demand for petroleum products, but also in the preference of the manufacturers of the new petrochemical products for locations close to oil refineries.

At present there are three petroleum refineries in the St. Clair Region. The **Imperial Oil Ltd.** refinery is the largest in Canada, employing some 1,400 persons and has a daily crude capacity of 94,000 barrels. The company produces a full range of petroleum products, numbering over 700 in total.

A modernization programme requiring the expenditure of approximately \$25 million was recently started at this site. It calls for the construction of a fluid coker, electric desalter and other facilities. At the present time, the plant's replacement cost is estimated to be in excess of \$100 million.

The refinery operated by **Shell Canada Limited** in Corunna was built in 1952 by the Canadian Oil Company Limited as a replacement for its Petrolia plant. It came under its present management in 1963 when Shell absorbed Canadian Oil. Capable of processing 40,000 barrels of crude per day, this plant is operated by a staff of 380 people and represents a capital investment of approximately \$48 million. Its output consists primarily of gasoline, distillates, heavy fuel oils and petrochemical feed.

The **Sun Oil Co. Ltd.** refinery in Sarnia was built in 1952 and has a daily crude capacity of 30,000 barrels. The refinery's production includes gasoline, kerosene, stove oil, light and heavy fuel oil and petrochemical feed. In 1966, a depropanizer unit was completed and work was begun on a gas plant and an hydrofluoric acid alkylation unit which are scheduled for completion during 1967. These three projects require the expenditure of roughly \$5 million — enough to increase Sun Oil's total capital investment at this site by approximately one-fifth. In addition, the firm announced a \$2 million plant modification programme in 1967, designed to handle, for the first time, synthetic crude oil extracted from the Athabaskan tar sands in Alberta.

In 1962, the output of the Region's three petroleum refineries was valued at \$253.5 million, 26.1 per cent more than in 1957. Consequently, their share of the Region's manufacturing total rose from 16.7 per cent to 20.1 per cent. However, they did not improve their position within the refining industry, since their share in the national refining total remained virtually unchanged, while regional refining represented only 63.4 per cent of the Ontario refinery output in 1962 compared with 71.8 per cent in 1957.





*—Courtesy—Ontario Department of Tourism and Information.*

**The Shell Canada Ltd. refinery at Corunna.**

It is significant to note that due to rapidly advancing technology and increased automation in the industry, productivity has risen with the result that labour force requirements declined by 16.8 per cent between 1957 and 1962.

In 1964, regional refineries had a combined daily crude capacity of 164,000 barrels, 37.4 per cent more than in 1957. This increase was comparable to the national growth in capacity, as the Region retained its share of the Canadian total, declining by only .1 per cent to 15.6 per cent in 1964. However, the Region's share of the Ontario total during 1957 and 1964



**THE PETROLEUM REFINING INDUSTRY, LAKE ST. CLAIR  
REGION, ONTARIO AND CANADA, 1957 TO 1962**

|                       | Estab-<br>lish-<br>ments<br>No. | Employ-<br>ees<br>No. | Salaries<br>and<br>Wages<br>(\$000's) | Cost of<br>Fuel<br>and<br>Electricity<br>(\$000's) | Cost at<br>Plant of<br>Materials<br>Used<br>(\$000's) | Selling<br>Value of<br>Factory<br>Shipments<br>(\$000's) |
|-----------------------|---------------------------------|-----------------------|---------------------------------------|--|---|--|
| <b>1957</b>           |                                 |                       |                                       |  |   |  |
| Lake St. Clair Region | 3                               | 2,276                 | 11,985                                | 906  | 165,415   | 200,934  |
| Ontario               | 13                              | 5,443                 | 28,998                                | 1,518  | 229,067   | 279,942  |
| Canada                | 53                              | 14,054                | 72,631                                | 7,035  | 821,949   | 1,022,827  |
| <b>1958</b>           |                                 |                       |                                       |  |   |  |
| Lake St. Clair Region | 3                               | 2,075                 | 11,454                                | 1,291  | 171,518   | 205,134  |
| Ontario               | 14                              | 5,345                 | 29,432                                | 1,785  | 255,977   | 302,843  |
| Canada                | 55                              | 14,080                | 74,579                                | 7,573  | 819,976   | 1,016,997  |
| <b>1959</b>           |                                 |                       |                                       |  |   |  |
| Lake St. Clair Region | 3                               | 1,940                 | 11,609                                | 1,085  | 181,715   | 217,313  |
| Ontario               | 14                              | 5,498                 | 33,164                                | 2,220  | 283,851   | 343,717  |
| Canada                | 52                              | 13,683                | 79,020                                | 8,935  | 855,977   | 1,097,963  |
| <b>1960</b>           |                                 |                       |                                       |  |   |  |
| Lake St. Clair Region | 3                               | 1,968                 | 11,784                                | 1,089  | 172,930   | 225,343  |
| Ontario               | 15                              | 5,416                 | 33,481                                | 2,223  | 268,747   | 344,682  |
| Canada                | 56                              | 13,779                | 81,869                                | 9,179  | 857,852   | 1,133,861  |
| <b>1961</b>           |                                 |                       |                                       |  |   |  |
| Lake St. Clair Region | 3                               | 1,916                 | 11,579                                | 1,177  | 176,347   | 238,484  |
| Ontario               | 15                              | 5,582                 | 35,451                                | 2,415  | 287,205   | 376,702  |
| Canada                | 57                              | 13,511                | 82,840                                | 10,968   | 911,644   | 1,201,628  |
| <b>1962</b>           |                                 |                       |                                       |  |   |  |
| Lake St. Clair Region | 3                               | 1,894                 | 12,011                                | 1,250  | 198,694   | 253,454  |
| Ontario               | 16                              | 3,196                 | 19,928                                | 2,460  | 311,577   | 399,480  |
| Canada                | 58                              | 10,535                | 64,593                                | 10,444   | 994,007   | 1,274,266  |

declined from 60.1 per cent to 53.4 per cent. Almost all of the crude processed by these refineries — approximately 58 million barrels in 1965 — comes from Western Canada via the Interprovincial Pipeline, while small quantities are obtained from local and Venezuelan producers. The domestic market west of the Ottawa River absorbs most of the regional refinery output.

**SARNIA RECEIPTS OF CRUDE OIL DELIVERED BY THE  
INTERPROVINCIAL PIPELINE, 1954 TO 1964**

| Year | Quantity<br>(000's of Barrels) | Year | Quantity<br>(000's of Barrels) |
|------|--------------------------------|------|--------------------------------|
| 1954 | 31,323.6                       | 1960 | 46,412.4                       |
| 1955 | 33,247.8                       | 1961 | 49,022.2                       |
| 1956 | 40,478.6                       | 1962 | 54,285.9                       |
| 1957 | 37,822.3                       | 1963 | 57,701.2                       |
| 1958 | 41,448.9                       | 1964 | 56,943.5                       |
| 1959 | 45,417.6                       |      |                                |

The **chemical and chemical products industry** in the Lake St. Clair Region consisted of forty-two manufacturers in 1962. Concentrated in Lambton County, they provided employment to 5,937 people and pro-

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duced an output valued at \$204 million, 16 per cent of the Region's total manufacturing output. This industry group comprised 19 per cent of the Provincial production of chemicals and chemical products and 11 per cent of the corresponding national production.

**Imperial Oil Ltd.** was the first oil company in the Region to manufacture chemicals when, during the late 1950's, it brought a chemical cracking unit into production on a site adjacent to its Sarnia refinery. Additional facilities have been constructed since that time, raising the Company's total investment in chemical production units to approximately \$60 million. The products produced include industrial solvents and the basic chemicals used in the manufacture of plastics, detergents, rubber fibres and numerous other synthetics. At present, an addition to the ethylene plant is being constructed at a cost of \$40 million and it was announced that new naphtha reformer and treating facilities valued at \$14 million will

Canada's first acrylonitrile plant, operated at Sarnia by Imperial Oil, began production in late 1965.

—Courtesy—Imperial Oil Ltd.



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

be installed during 1967-68.

The **Sun Oil Co. Ltd.** and **Shell Canada Limited** have also entered the chemical field, although on a much smaller scale than Imperial. Sun Oil's output consists entirely of butylenes, while Shell's output includes aromatic solvents, benzene, butylenes, ethane, ethylene and sulphur.

**Polymer Corp. Ltd.** located in Sarnia, is one of the world's few fully integrated synthetic rubber plants. Established in 1942, as a Crown corporation and with a staff of over 3,000, it is Sarnia's largest employer. At present, this plant has a production capacity of 250,000 long tons of synthetic rubber per year, which will be expanded during the next two years with additions to the styrene and ethylbenzene capacity. The annual output consists of more than forty different types and grades of rubber and is roughly equivalent to 10 per cent of the world's synthetic rubber production. Between sixty and seventy per cent of this total is marketed abroad, primarily in Western Europe. About four-fifths of Canada's annual rubber requirements are supplied by this company.

The broad scope of Polymer's product range is a result of the Company's extensive research activities. Maintaining one of the largest research centres in Canada, the Polymer Corporation enlarged these facilities during 1966 at a cost of \$1.5 million.

**Dow Chemical of Canada Ltd.** located a styrene plant in Sarnia in 1947, the first unit which led to a major plastics and chemical complex. Today the company employs over 1,000 persons and manufactures a wide

Part of the production facilities of Polymer Corporation Ltd., Sarnia.

—Courtesy—Polymer Corporation Ltd.



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range of chemicals and plastics, including chlorine, caustic soda, glycol, vinyl chloride monomer, chlorinated solvents, hydrochloric acid and polystyrene. Comprising approximately twenty units, this complex is the result of almost twenty years of uninterrupted growth and represents a capital investment of approximately \$100 million. Exports account for about 15 per cent of annual output and the prime market areas are the United Kingdom and the Far East. The Company also maintains extensive research facilities at this location.

An expansion program entailing the expenditure of more than \$20 million is now underway at this site. Additional facilities were recently constructed for producing anhydrous ammonia, vinyl chloride, styrene, methyl chloroform and caustic chlorine.

**Cabot Carbon of Canada Limited** has been located in Sarnia since 1952. Employing about 140 people, the plant represents a capital investment of more than \$8 million and produces mainly carbon black, an essential component in the manufacture of rubber goods. Recently, the completion of a \$1.5 million expansion program raised the plant's annual capacity to roughly 110 million pounds.

The ranks of Sarnia's chemical manufacturers were enlarged in 1960 by the arrival of **St. Clair Chemical Ltd.** — Canada's first producer of anhydrous aluminum chloride. The Company's facilities are capable of producing some 3.5 million pounds of this catalyst annually.

Anti-knock-compounds were manufactured in Canada for the first time during 1956, when the **Ethyl Corporation of Canada Ltd.** commenced operations in Corunna. The Company now has approximately \$13 million invested at this site, where it employs over 100 people. The output of this plant also includes significant quantities of gasoline additives and catalysts which are by-products.

**Du Pont of Canada Limited**, established a polyethylene resin plant in Corunna in 1960. Operating with a staff of 175 persons, it is the only single-process plant in North America capable of producing a full range of such resins. The construction of additional facilities in 1963 raised this plant's annual capacity to approximately 50 million pounds.

**Allied Chemical Canada Limited**, the most recent arrival among Corunna's chemical manufacturers, produces toluene diisocyanate — an organic compound used in the manufacture of flexible urethane foams, paints and varnishes. Built in 1963, Allied's plant has an annual capacity of 5.5 million pounds and is operated by a small staff of highly trained personnel.

The lower St. Clair valley's association with the petrochemical industry dates from early 1966, when the **Chinook Chemicals Corporation Limited** established a plant in Sombra. Representing a capital investment of \$2 million the plant produces methylamine and methylating derivatives.

A significant event in the Region's chemical industry occurred in 1967, when **Canadian Industries Ltd.** completed the construction of Ca-



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

nada's largest fertilizer complex in Courtright. Estimated to represent an investment of \$50 million and employing some 300 people, it has as a nucleus an anhydrous ammonia plant with a capacity of 1,000 tons per day, the output of which is used to feed nitric acid, ammonium phosphate, ammonium nitrate and urea units. This concern differs from the other petrochemical plants in the Region in that inputs derived from natural gas, rather than petroleum, form the basis of its operations. The Region's gas supply is distributed by the **Union Gas Co. of Canada Limited** and originates primarily in Western Canada, although a substantial volume is also obtained from local and American producers.

The **food and beverages industries** are an important group in the St. Clair Region ranking second in terms of employment and third in terms of annual output value. Comprised of 204 establishments, they provide jobs to 8,742 persons or 20 per cent of the Region's manufacturing workers and accounted for \$242 million or 19 per cent of the Region's industrial output in 1962. This group represents a substantial part of Ontario's food and beverage industries, accounting for 9.9 per cent of the Provincial output.

The fruit and vegetable canners and preservers comprises the largest part of the Region's food and beverage industries, employing 43 per cent of the workers in this group and accounting for 38 per cent of the output value. Next in significance are the dairies with 11 per cent of the employees and 7 per cent of the output. Other major segments include feed manufacturers, bakeries, soft drink manufacturers and poultry processors, which together account for 16 per cent of the group's total employment and 11 per cent of the output. The remaining 30 per cent of the workers in this group are employed in a wide variety of food and beverage plants producing a diversity of products including alcoholic beverages, and together account for 44 per cent of the group's total output.

Approximately 48 per cent of the Region's food and beverage industries are located in Essex, 28 per cent in Kent and 24 per cent in Lambton. Within Essex is situated the plant and international headquarters of **Hiram Walker and Sons, Ltd.**, distillers and bottlers of alcoholic beverages. Established in 1855, the plant employs over 1,000 people, and is the third largest employer in the Greater Windsor area. **Calvert Distillers Limited**, located in Amherstburg, is a branch of the well-known Seagram's of Montreal and employs approximately 250 people. Another comparatively large establishment in the Windsor area in the food group is **The Purity Dairies Limited**, producing dairy products and ice cream, and employing between 250-500 people depending on seasonal requirements. The well-known **H. J. Heinz Company of Canada Ltd.** has the largest tomato processing plant in the British Commonwealth located at Leamington. Employing some 2,500 persons, the plant's output comprises a wide variety of canned and processed foods including baby foods, soups, sauces, tomato ketchup and juice.

In Kent, **Libby, McNeill and Libby of Canada Limited** established a



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plant in Chatham in 1957 to produce a diversity of frozen, canned and bottled food products. This firm also has a branch plant in Wallaceburg. In addition, the **Campbell Soup Company Ltd.** is located in Chatham and produces soups and vegetable juices. The **Canada and Dominion Sugar Company Limited** is a large employer in Chatham, processing sugar, dried beet pulp and molasses.

| FOOD AND BEVERAGE INDUSTRIES,<br>LAKE ST. CLAIR REGION, 1962 |                     |            |              |            |                       |            |                                  |            |
|--|---------------------|------------|--------------|------------|-----------------------|------------|----------------------------------|------------|
|  | Establish-<br>ments |            | Employees    |            | Salaries<br>and Wages |            | Value of<br>Factory<br>Shipments |            |
|  | No.                 | %          | No.          | %          | (\$000's)             | %          | (\$000's)                        | %          |
| Poultry processors   | 10                  | 5          | 242          | 3          | 595                   | 2          | 7,134                            | 3          |
| Dairy factories  | 29                  | 14         | 941          | 11         | 3,998                 | 11         | 16,362                           | 7          |
| Fruit and vegetable canners<br>and processors                | 28                  | 14         | 3,780        | 43         | 14,807                | 42         | 92,652                           | 38         |
| Feed manufacturers   | 33                  | 16         | 216          | 2          | 825                   | 2          | 8,421                            | 4          |
| Bakeries   | 62                  | 30         | 680          | 8          | 2,335                 | 6          | 8,012                            | 3          |
| Soft drink manufacturers                                     | 14                  | 7          | 270          | 3          | 1,103                 | 3          | 3,542                            | 1          |
| All other food and beverage<br>manufacturers                 | 28                  | 14         | 2,613        | 30         | 12,293                | 34         | 106,047                          | 44         |
| <b>Total, Region</b>   | <b>204</b>          | <b>100</b> | <b>8,742</b> | <b>100</b> | <b>35,956</b>         | <b>100</b> | <b>242,170</b>                   | <b>100</b> |

The **metal fabricating industries** included 146 plants, employing 4,800 persons in 1962 or 11 per cent of the Region's industrial work force and producing an output valued at \$74 million. In terms of employment, this group ranked fourth largest in the Region and fifth largest in terms of output. To a large extent, the growth and development of many of these firms can be attributed to their role as suppliers to the transportation equipment industry. However, the range of products produced is very wide, extending far beyond transportation equipment.

The Region's metal fabricating industries are composed of 54 hardware, tool and cutlery manufacturers, 25 metal stamping, pressing and coating plants, 22 machine shops, 15 manufacturers of ornamental and architectural metal products and 30 plants producing miscellaneous other metal products.

Within this group of industries, the miscellaneous metal fabricating manufacturers account for 40 per cent of the output and employ 16 per cent of the group's work force. The manufacturers of hardware, tool and cutlery rank second, contributing 20 per cent of the group's output and employing more than one-quarter of the workers and in addition, represent a substantial part of the Ontario industry, comprising 17 per cent of the Provincial output and employment in their respective category.

Among the largest metal fabricating firms in Windsor is the **Canadian Motor Lamp Co. Ltd.** which produces various stampings and supplies the automotive companies with lighting equipment. **Fabricated Steel Products (Windsor) Ltd.** also employs a fairly substantial labour force, manufacturing steel and metal products, stampings and material handling

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to 9.4 per cent reflecting largely structural changes in the automotive industry.

As a result of the Automotive Free Trade Agreement with the United States, plans for expansion in the transportation and related industries are in progress while sizable capital investments are anticipated for the future. Continued growth in the petrochemical industry and food processing along with favourable developments in the automotive sector will be instrumental in maintaining a steady long-term growth of the Region's industrial output.

Recent studies by the Department's Economic Planning Branch estimate that total provincial output will grow at an average annual rate of 5.75 per cent which is consistent with national "economic goals" set by the Economic Council of Canada in its 1964 annual review. Long-term econometric projections made by the Royal Commission on Health Services ("Canadian Economic Growth" by T. M. Brown, 1964) further support this estimate.

On the basis of current growth patterns and the projected growth rate total provincial output is expected to reach some \$28 billion (constant 1956 dollars) by 1976. Recent trends in the Region indicate that manufacturing output will range between 10.0 per cent and 10.8 per cent of Ontario's total output with a production volume of \$2.8 to \$3.0 billion (constant 1956 dollars). Assuming an average of \$2.9 billion (constant 1956 dollars) in 1976, total manufacturing output will grow at an annual rate of 6.50 per cent over the 1962-1976 period.

## TRANSPORTATION AND COMMUNICATIONS

Holding an important position at the heart of North America's industrial complex, the Lake St. Clair Region is well supplied with a comprehensive transportation and communications network providing speedy access to prime markets and to industry's main sources of supply. Airports, seaports, railway systems and highways — all ensure mobility for passengers and freight alike, while the requirements of private individuals and business interests are met by telegraph and telephone systems utilizing the most modern techniques. Current events are covered at international, national and local levels by a variety of newspapers published in the various communities.

### **Railways**

There are five main railroads operating in the Region — Canadian Pacific, Canadian National, New York Central, Chesapeake and Ohio, and the Norfolk and Western, supplemented by the local Essex Terminal Railway. This network provides the geographical link with Michigan to the West, Buffalo and Toronto to the East.

The New York Central System runs a double track mainline through Essex and Kent Counties. Its branch lines comprise the Amherstburg Branch, running from Amherstburg to Essex, a distance of some 17 miles, and the Leamington Branch, from Comber to Leamington. The mainline runs from the Detroit River at Windsor, continuing over the regional border near Highgate to Buffalo, while branching off northeast to Hamilton. Stations in the Region are at Essex, Roscomb, Comber, Tilbury, Fletcher, Fargo, Ridgetown and Highgate. The line at Fargo connects with the Chesapeake and Ohio running from the Port of Emen to Sarnia. The New York Central possesses no trackage at all in Lambton County. At present, six passenger trains a day are handled over the mainline (three in each direction), as well as six bonded freight trains.

A local day freight travels between Windsor and Niagara Falls, Ontario, in each direction, providing a necessary service at agencies and interchange points. Every day of the week, except Sunday, a local service

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is operated between Windsor and Amherstburg and to and from Leamington and Comber. In Windsor, an interchange is provided with the local Essex Terminal Railway, and with the Canadian Pacific Railway, performing regular locomotive maintenance and emergency car repairs.

Among the major commodities originating at New York Central's stations in the Lake St. Clair Region are canned goods, chemicals, autos and auto parts. Freight shipped into the Region includes newsprint, scrap iron, auto parts and stone.

The Canadian National Railways operates a total of 128 miles of track in the Region. Trackage is composed partly of the Toronto-London-Sarnia route, connecting with the Grand Trunk Western Railway at Port Huron, and partly of the London-Windsor route. The former spans a distance from Sarnia in Lambton County to four miles east of Watford, while the latter is laid from Windsor in Essex County to a point two miles northeast of Bothwell.

The London to Sarnia line carries 14 freight trains per day on average, and six regular daily passenger trains, including through service trains from Windsor to Chicago.

The Windsor line, double track from Windsor to Glencoe, carries a daily average of some 18 trains. These include four Canadian National freight trains between Windsor and Toronto, two local switching trains, two fast express freights and six regular passenger trains. At the same time, this Canadian National line carries four Norfolk and Western trains daily to and from Buffalo. The operation is under a joint agreement, originally made with the Wabash Railroad Company, now incorporated into the Norfolk and Western System by way of a recent amalgamation.

At both Sarnia and Windsor, piggyback service with ramp facilities is provided. Also at Sarnia, the St. Clair River tunnel carries all Canadian National and Grand Trunk Railway traffic on the east-west line linking Toronto-Sarnia-Port Huron and Chicago.

The Region is served by Canadian Pacific Railway's main line from London to Windsor, which carries a regular schedule of six freight trains and three way freights. Passenger service is provided by diesel trains twice a day in both eastward and westward directions.

Canadian Pacific's main line runs parallel with the Canadian National line from the border of Lambton and Middlesex Counties at Newbury to Chatham, from which it runs further south before heading towards Windsor. The total distance covers approximately 77 miles of mainline track in the Region. Among the stopping points in the areas are Thamesville, Chatham, Tilbury, Belle River and Windsor. Unlike some of the other systems, the company operates no branch lines in the area. A "piggyback" service is in operation from Windsor, its loading point, while an express service is maintained between all the main centres.

The Norfolk and Western Railway Company's line operates only freight trains under joint agreement with Canadian National Railways. The





The Rail Yard at Sarnia.

—Courtesy—Ontario Department of Tourism and Information.

distance between the regional track limits, Bothwell to Windsor, is 68 miles, while stations are situated at Bothwell, Thamesville, Northwood, Chatham, Prairie Siding, Jeanettes Creek, Stoney Point, Belle River, Tecumseh, Walkerville and Windsor. Two through freight trains a day travel eastbound and westbound, between Buffalo, New York and Windsor. However, they handle none of the traffic to or from the Canadian National mainline route stations, this being primarily undertaken by joint local trains.

The Chesapeake and Ohio Railway Company operates some 165 miles of main track within the boundaries of the Region. In Essex County, 46 miles of track extend from Windsor to Wheatley; in Kent County there are 94 miles of track consisting of 48 miles from Wheatley to the Town line on the eastern boundaries west of Rodney, and 46 miles from Erieau to Whitebread, approximately four miles north of Wallaceburg; Lambton County has a line running from Whitebread to Sarnia, a distance of some 25 miles.

Two local freight trains operate daily in Essex County, except on Sundays, while there are four fast freight trains each day. In Kent County there are four local trains per day, excepting Sunday, and six fast freight trains daily. The County of Lambton is served by two local freight trains, while each day two fast freight trains are scheduled.

The Company discontinued handling carload freight traffic of shipments less than 6,000 pounds in weight, in July, 1965. Up to that date, such



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traffic was managed on local freight trains, between the terminal points already described. No passenger service or express service is provided by the Chesapeake and Ohio.

The Essex Terminal Railway runs almost parallel with the Detroit River from Ojibway to the junction with the New York Central System Railway, located a few miles north of Amherstburg. Total trackage covers 50 miles, concentrating purely on the shipping of freight, primarily for servicing industry. The line maintains a linkage with all the major railroads. Freight cars are picked up at both the intersections and at the Company sites. The three stops of Ojibway, Windsor and Amherstburg are the sole points of interest to the company, no stops between these points being contemplated for the future.

In view of the rapid economic development in the Region, the railway companies spend large sums on regular maintenance as well as on special services. The New York Central System spent heavily on tie renewals during 1966, while a programme for the replacement of flasher lights and bells at public crossings by gates is underway. Introduction of ten installations per year is under consideration, costs to be borne by Government, the municipality and the Company.

Canadian National recently laid 12 miles of new track south from the Sarnia Yard to the developing area around Moore and Sombra townships. The prime purpose of this spur line is to serve a new ammonia and chemical fertilizer complex situated on a 1,000 acre site.

Chesapeake and Ohio foresees further industrial development in the Sarnia-Courtright area of Lambton County and will provide the vicinity with the required rail transportation.

### **Roads and Highways**

The Region possesses a road network of 6,238 miles shared almost equally among the three Counties. The bulk of the network is in the form of organized township roads, their 3,745 miles accounting for 60 per cent of the total. Urban roads cover 961 miles, county roads 905 miles and King's Highways 627 miles, or 10 per cent of the total regional mileage. There are no secondary highways, unorganized township roads or tertiary roads in any of the three Counties. Organized township roads tend to form the bulk in each County. In Essex and Kent this type of road accounts for 56 per cent, representing 2,284 miles, while the highest proportion of organized township road is in Lambton.

Essex County has the highest percentage of urban roads in its network, (25 per cent) representing a distance of some 507 miles. Kent County's urban road structure is the smallest, amounting to just 211 miles or 10 per cent of a total 2,050 miles, a greater significance being attached to its 404 miles of county roads, almost 20 per cent of the Kent aggregate.

The 225 miles of King's Highway in Essex account for 11 per cent of the County total. Kent County has 212 miles of King's Highway, 10 per cent of its total, while in the Border Sub-Region as a whole the 436 miles of

## TRANSPORTATION AND COMMUNICATIONS

King's Highway account for 11 per cent of the road network. Of Lambton's 2,137 miles, nine per cent or 190 miles are classed as King's Highway.

The major King's Highway is the Macdonald-Cartier Freeway, previously known as Highway No. 401. This Freeway has been open since November, 1964, to traffic from Windsor through to the Quebec border, more than 400 miles of highway, the greater part of this distance being covered by four lanes. Inside the Region, it extends over a distance of slightly more than 71 miles from Windsor to the Kent-Elgin border. Its starting point close to the Detroit River renders the Highway vitally significant to the flow of traffic between United States and Canadian locations, providing speedy access to the Toronto market, the Province of Quebec and to the Maritime Provinces.

The Macdonald-Cartier Freeway now carries an average daily traffic of 5,459 vehicles in the Region. Compared with a 4,217 average in 1960, the four-year interval showed a 29 per cent increase in the annual average daily traffic, while the actual highway mileage more than doubled in length from 31 miles to 77 miles. Traffic is densest along the 13 miles between the Elgin-Kent boundary and Highway 21, more than 6,000 vehicles per day travelling over this particular stretch of highway.

Highway 2 (following a similar route to the 401) while carrying heavier traffic than the Freeway in the immediate Windsor vicinity, appears to have lost its basic regional traffic to the extended Macdonald-Cartier Freeway. This highway also reaches toward the Quebec boundary, and has 59 miles of its total length within the Region, between Windsor and Thamesville. The annual average daily vehicle traffic of 3,388 was 24 per cent lower than the 1960 figure of 4,474, a decline apparently moving in inverse ratio to the 29 per cent increase on the 401.

Highway 3, linking Windsor with Fort Erie and the Buffalo, New York area beyond the international border, covers a distance of 67 miles through Essex and Kent. The 3,556 average vehicle traffic per day compares with 3,328 in 1960, seven per cent heavier.

Within the Region, Highway 98 goes from Windsor through the Counties of Essex and Kent, to Blenheim, where it joins Highway 3. The highway extends for 57 miles, two miles less than in 1960; its density of traffic declined by 28 per cent, from 2,488 to 1,801, during the period under review.

Highway 7 runs for some 40 miles within the Region, between the Junction at Highway 81 and Sarnia in Lambton County. Since 1960 the annual average daily traffic increased from 3,534 to 3,870 vehicles.

The Region's longest highway is No. 21, which takes traffic from Highway 3, south of Ridgetown, through Kent and Lambton Counties and on to Owen Sound, in the Georgian Bay Economic Region. It covers 79 miles within the Lake St. Clair Region, bounded by Highway 3 and Grand Bend. However, its average traffic per day of 1,930 is somewhat below the regional average.

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

Highway 40 acts as a significant link between the focal points in Lambton County and Kent County, namely Sarnia and Chatham. It is built along the St. Clair River, continuing to Chatham via Wallaceburg, a total distance of 42 miles. The only other King's Highway of any considerable length is No. 18, running from Leamington to Windsor, a distance of 41 miles, but serves primarily local traffic.

The heaviest traffic in the Region is centred upon the stretch of Highway 3B in the Windsor area, where average daily traffic density reaches 13,132 vehicles. Also, sections of other highways in this area experience heavy flow, such as a part of the No. 98, by the Canadian Pacific Railway crossing, which has approximately 16,000 vehicles using it each day.

The Region is served by a total of twenty-five King's Highways carrying an overall average daily traffic of 2,874 vehicles over their 627 miles. Thirteen of these highways serve Essex County, eight run through Kent County, while twelve King's Highways contribute to Lambton County's total road network.

Expenditures by the Department of Highways on highways and on other roads in the Region remained at approximately \$9 million in 1964 and 1965, but increased to some \$10 million in 1966. The major portion of Departmental expenditure is devoted to construction, while between 10 and 15 per cent of the money is utilized for basic maintenance purposes. Most of the total construction and maintenance expenditures are set aside for the building and extension of Secondary King's Highways.

Recent improvements of the regional highway system include the opening of two extra lanes on the Macdonald-Cartier Freeway east of Chatham, in 1965, ensuring that the longest toll-free, controlled access multi-lane highway in Canada would hold at least four lanes on the 400 mile road stretch between Windsor and a point east of Ganonoque. A feature of the 13-mile section from Kent County Road to the Kent-Elgin boundary was the planting of some 1,500 trees and shrubs lining the route.

Proposals have already been drawn up for extension of the existing system and traffic projections for Highway 40 between Sarnia and London indicate that by 1985 there will be 15,000 vehicles per day between these two points while traffic on the Macdonald-Cartier Freeway will vary between 12,000 and 20,000 vehicles per day, whereas from Grand Bend to Sarnia traffic flow is expected to reach 7,000 cars per day.

The King's Highways and secondary highways come under the jurisdiction of the Provincial Government, while other roads are subject to the administration of local governing bodies in urban centres, townships and Counties. However, the Province makes substantial contributions to the municipalities in the form of subsidies on approved spending, for construction and maintenance of local roads and bridges.

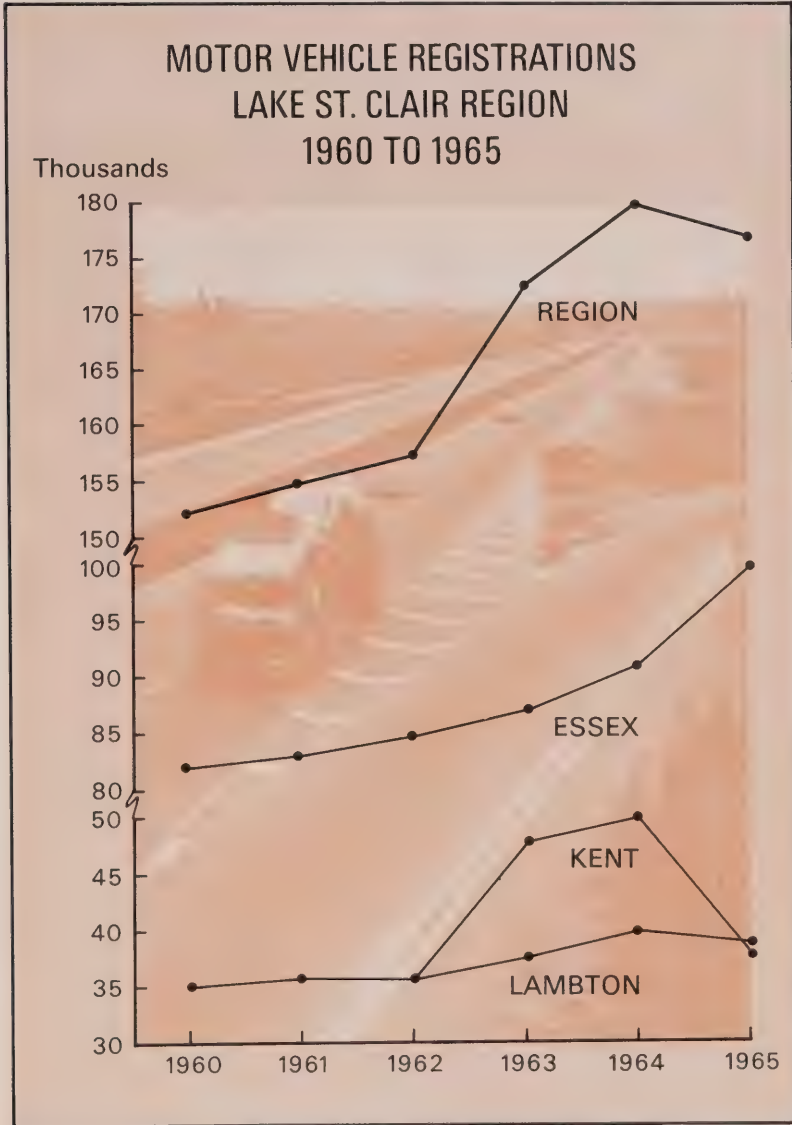
### **Motor Vehicle Registrations**

Reflecting the over-all national trend towards a steadily increasing car population, the number of motor vehicles registered in the Region rose

## TRANSPORTATION AND COMMUNICATIONS

from 152,173 units in 1960 to 176,892 in 1965, representing a 16 per cent gain.

Essex County accounts for some 56 per cent of the total number of registrations, while Kent and Lambton Counties each represent about 22 per cent of the Region's motor vehicle population. In all Counties, the





## **LAKE ST. CLAIR REGION ECONOMIC SURVEY**

majority of registrations is for passenger automobiles, which account for about 85 per cent of the total, while commercial vehicles play a much less significant role.

### **Trucking**

The Region is well endowed with an extensive truck transportation network, some sixty-eight trucking companies offering their services to business concerns and individuals in the three Counties. Thirty-nine of these companies hold rights to ship goods and materials within the Province of Ontario.

Sixteen trucking concerns in the Region possess international jurisdiction, serving various centres in the United States, although, by reason of the area's geographical location, Detroit is their prime U.S. centre. Many other enterprises concentrate on conducting a public commercial service between communities on the King's Highways and other specified locations.

Large trucking centres include Windsor, with twenty-eight carriers, Chatham with eighteen carriers, Tilbury with twelve, and Tecumseh, Thamesville, Sarnia and Wallaceburg each with nine. As many of the companies possess most of the trucking licenses, some including international jurisdiction, these areas are quite comprehensively serviced. Viewing the network on a County basis, thirty-seven shippers operate in Essex County, thirty-two in Kent County and seventy-four in Lambton.

Throughout the Region, Western Freight Lines Ltd. are represented in more centres than any other company. The company operates in 35 communities, also having four call stations outside of the Region. Other large freight movers, operating in more than ten locations are, Inter-City Lines Ltd., Direct-Winters Transport Ltd., Consolidated Truck Lines Ltd., The Overland Express Ltd., Smith Transport Ltd., Lyons Transport Ltd. and Thibodeau Express Ltd. Most of these retain terminals and call stations inside and outside of the Region. The majority of these companies move goods to and from points across the Canadian-American boundary.

Canadian National operates two major highway service routes in the area, one between London and Chatham, the other between London and Sarnia. Both of these routes are integrated with its rail express freight operations, and also serve smaller intermediate centres off the main 'rail-head' at London.

### **Water Transportation**

The Region has twelve shipping ports, most of them operating on a minor scale, except for Windsor and Sarnia. Seven of these ports are located in Essex County, three in Kent County and two in Lambton County.

Both from the tonnage weight and traffic frequency aspects, the Port of Sarnia is the busiest for coastwise shipping. The Port of Sarnia is situated at the mouth of the St. Clair River, opposite Port Huron (U.S.A.), to which it is linked by the Blue Water Bridge. Accommodation consists of more than two miles of waterfront facilities, including docks at Point





— Courtesy—Ontario Department of Tourism and Information.

**The "Nipigon Bay" loading fuel oil at Sarnia.**

Edward. Principal docks are the Sarnia Elevator dock, served by 5 rail tracks; the Department of Transport docks; Canadian National Railway — Canada Steamship Lines joint dock; the Imperial Oil docks; Sun Oil dock; Canadian Oil Company dock; and Dow Chemical Company dock. Besides these, there are a few other berthing facilities and winter lay-up accommodation owned by private interests.

The Port of Windsor is the Region's second largest, situated on the Detroit River, reputed to be the world's busiest waterway with about one ship passing the channel every twenty-six minutes. Furthermore, Windsor is now a new St. Lawrence Seaway port on the river's south bank, while acting as a national Port of Entry for the Customs Authority. Operated by the Windsor Harbour Commission, the port possesses a modern transit shed as well as loading and unloading facilities owned by Morton Terminal Ltd. Due to its extensive port facilities, the Windsor area's active industrial complex and growing consumer market can be served by the Northwest Steamship Company and Canada Steamship Lines as well as ocean-going vessels.

Largest items of foreign cargo tend to be bituminous coal, unloaded at both Windsor and Sarnia, the major Lake St. Clair Region manufacturing centres, but also Amherstburg, Erieau and Walkerville; sand and gravel, unloaded primarily at the Point Pelee and Windsor ports; limestone, unloaded at Sarnia and also at Windsor and Walkerville, though on a much smaller scale. Chemicals are both loaded and unloaded for

## **LAKE ST. CLAIR REGION ECONOMIC SURVEY**

foreign shipment at the Sarnia harbour while synthetic rubber represents an important outbound cargo.

Regarding coastwise shipping, the prime commodity is fuel oil, loaded in large quantities at Port Sarnia from the area's large refining complex. A fair proportion of this cargo is unloaded at the Windsor port. Lubricating oil and grease are unloaded in Sarnia, while large quantities of gasoline are also loaded. Chemical cargoes leave the Sarnia harbour, although a slightly lesser cargo is unloaded.

Other major cargo commodities in coastwise shipping are wheat and wheat flour, salt, grain feeds, steel bars, rods and structural shapes, food preparations, soybeans; dolomite is handled at both the Windsor and Walkerville ports and at Wallaceburg.

Total tonnage handled by regional ports in coastwise shipping increased from 3.2 million tons in 1963 to an average of four million tons in recent years, representing a 67 per cent over-all growth.

The Detroit River, Lake St. Clair and the St. Clair River act as waterways from Port Colborne, through the Welland Canal, whose starting point is at Port Weller on Lake Ontario. The famous canal itself provides the main link between the Lake St. Clair Region and the busy St. Lawrence Seaway further eastward.

### **Air Transportation**

The major regional Airport is at Windsor, some two miles outside of the City centre, operated by the Federal Department of Transport, and classified as a Customs Port of Entry and Exit for both domestic and international traffic. Scheduled Air Service is available from Air Canada, Canadian Pacific Airlines and Nordair. Modern terminal buildings and facilities at the neighbouring Detroit Airports ensure good air connections to all parts of the North American Continent.

The City of Chatham, in Kent County, operates a land-based aerodrome with turf surface, located eight miles south of the city centre and covering some 315 acres of land. There are two, tile-drained runways, each 500 ft. wide, the longer landing strip stretching over 4,300 ft. of grassland. Classified, like Windsor, as a Customs Port, the airport's activities also embrace student training flights, aerial photography, crop dusting and provision of facilities for chartered flights undertaken in the area.

Pelee Island has an airport with a turf landing strip of 2,800 ft. It is operated by the Township of Pelee, in the County of Essex, and remains active during all seasons.

Sarnia's land aerodrome has two runways, one asphalt, the other turf. The longer of the two measures almost 3,000 ft. in length. Operated by Sarnia St. Clair Air Services Ltd., the airport provides service for the Southwestern Ontario area, while St. Clair Air Services themselves operate primarily between Sarnia and London on a non-scheduled charter basis. Semi-scheduled or chartered airlines are offered by Seneca Air

## TRANSPORTATION AND COMMUNICATIONS

Service and Great Lakes Services Ltd. However, the latter was recently granted a regular air service between Sarnia and Toronto by the Air Transport Board. The company has stated that this service is most likely to be economic, in view of the greater industrial activity in Sarnia since 1962, a trend that has already created in its wake considerable pressure from industry for passenger travel. The airport has a charter service to any airline terminus, while air cargo is transported on a charter basis. Previously, all activities were fundamentally at the service of business interests, no air passenger service being available, until the recent Air Transport Board announcement.

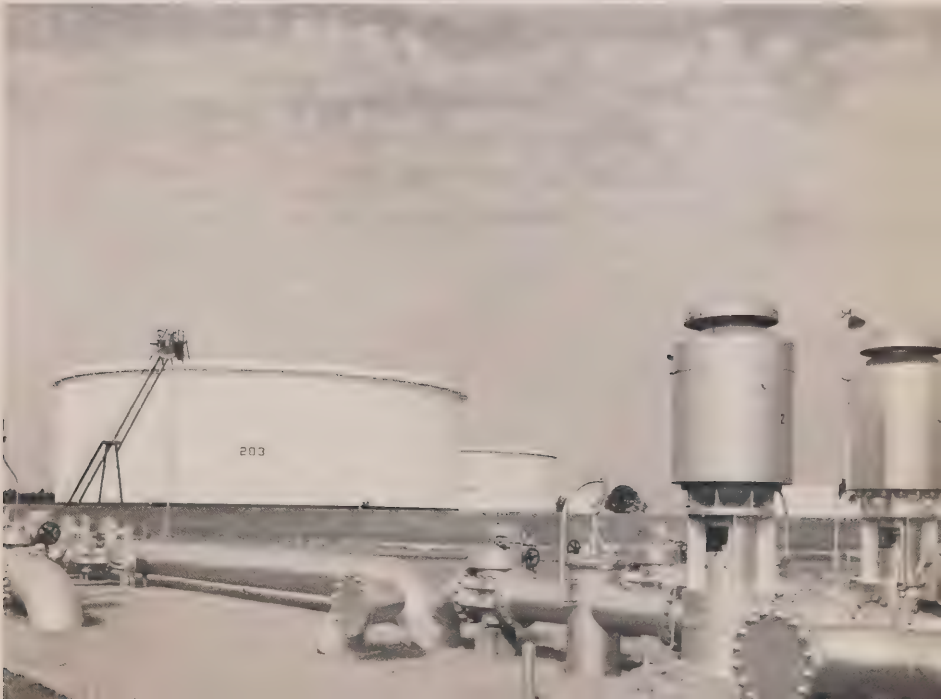
Other regional airfields are at Wallaceburg where both freight and passenger services are obtainable, Tecumseh and Cottam. Leavens Bros. Ltd. of Toronto, operates non-scheduled flights between Windsor, Leamington and Pelee Island and offers a non-scheduled charter service, based at Leamington, Windsor and London, for the Southwestern Ontario market in general.

### Gas and Oil Pipelines

The Region features a highly developed natural gas distribution and transmission system. Owned and operated by The Union Gas Company of Canada Limited, this system is supplied largely by the Trans Canada Pipeline, which transports gas from Western Canada to Trafalgar Township, near Toronto. A 142 mile, 26 inch pipeline is used to convey the gas the remaining distance to the Company's storage fields in Dawn

**Oil storage and pumping system for a pipeline in the Sarnia area.**

*—Courtesy—Ontario Department of Tourism and Information.*



## **LAKE ST. CLAIR REGION ECONOMIC SURVEY**

Township, Lambton County. The latter pipeline is paralleled for over half its length by a 34 inch line which will be gradually extended towards the eastern terminus of the other line as market conditions warrant.

A larger supply of Western gas will be available to the Region in the near future since approval was recently granted by the U.S. Federal Power Commission for the construction of a 1,000 mile, 36 inch pipeline between Emerson, Manitoba and Sarnia which is expected to come into service during 1968. The balance of Union's gas supply is obtained from the southern United States, through the agency of the Panhandle Eastern Pipeline Company, and from local producers.

More than 60 million barrels of Western Canadian crude oil are delivered to the Sarnia area each year by the Interprovincial Pipeline, with terminals at Edmonton and Port Credit in Peel County. Its contribution to the regional economy has become steadily more significant and illustrated by the fact that during the decade which ended in 1966 its deliveries increased from 40.8 million to 62.7 million barrels. Two products pipelines which link the Sun Oil and Imperial Oil refineries in the Sarnia area with Toronto represent another important component of the Region's pipeline network.

### **Communications**

Reflecting the Region's strategic position within Ontario, all major media of communication are well represented in the form of a highly developed communications system to convey and disseminate efficiently information throughout the Region.

#### **Telephones**

At the end of 1965, the total number of telephones reached 191,066 representing a 55 per cent increase over 1954. About 93 per cent of installed telephones are operated by the Bell Telephone Company while the remaining seven per cent are owned by twelve independent systems. Some 58 per cent of the total number of telephones are installed in Essex County whereas Kent and Lambton Counties account for 20 per cent and 22 per cent respectively.

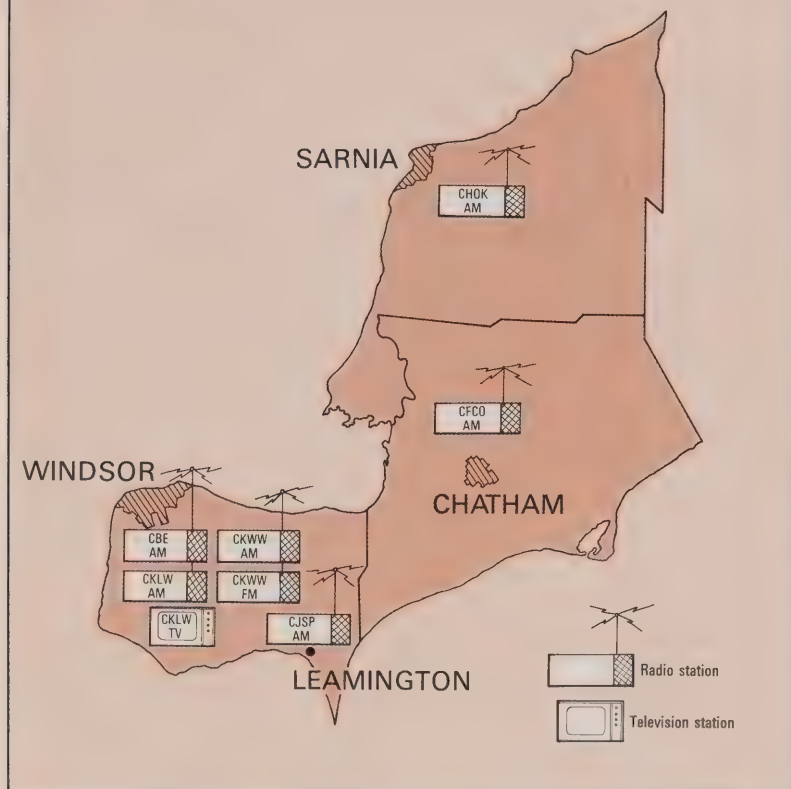
Whereas the number of subscribers to the regional Bell Telephone system rose by 66,000, the number of telephones operated by the twelve independent systems increased only by 1,400 during the period from 1954 to 1965. Five independent systems ceased to operate and were taken over by larger systems as the number of subscribers proved inadequate to generate sufficient funds for modernization and expansion of efficient service facilities.

#### **Radio and Television**

The field of Regional broadcasting embraces seven radio stations, five of them privately owned, and one television station. The television concern operates on Channel 9, and is a Canadian Broadcasting Company TV Network affiliate, based in Windsor. Windsor is also the home of the Region's sole FM radio frequency station, CKWW-FM,



## RADIO AND TELEVISION STATIONS LAKE ST. CLAIR REGION, 1966



(owned and operated by Western Ontario Broadcasting Corporation Ltd.) and for CBE, owned and operated by the CBC Radio Network. In total, Windsor possesses four radio stations. Others are situated at Leamington (Essex County), Chatham (Kent) and Sarnia (Lambton), each possessing one station. Sarnia's radio station is also affiliated to the CBC Radio Network while being owned and operated by Sarnia Broadcasting (1964) Ltd.

### **Press**

The major press is represented by three daily newspapers in the Region:— the Chatham Daily News, with a circulation of some 14,000, the Sarnia Observer, catering to nearly 16,500 people and the Windsor Star, a Star Publishing Company outlet claiming a circulation of more



## **LAKE ST. CLAIR REGION ECONOMIC SURVEY**

than 81,000. In both Chatham and Windsor, weekly and monthly newspapers are published for various ethnic groups. Sarnia has a weekly besides its daily; Chatham has two weeklies and a daily, while Windsor has daily, weekly and monthly papers. Altogether thirty-two newspapers provide information and comment, much of a local nature, to the inhabitants of twenty-four of the Region's municipalities, seven in Lambton County, eight in Essex County and nine in Kent County. There is also a trade newspaper distributed in Chatham, known as the Chatham Southwest Shopping News which reaches sales of 14,000 copies. However, it is a weekly publication issued during the summer months only.

Among the Region's institutional publications are three produced on the University of Windsor campus—the 'Lance' an undergraduates' weekly newspaper, the yearbook, known as 'Ambassador', and a literary magazine entitled 'Generation'.

## CONSTRUCTION, HOUSING AND HOUSEHOLD FACILITIES

The level of construction activity plays a significant role in assessing a Region's over-all economic position and its performance over time. As such, it represents an important indicator of standards of living, reflecting progress in the spheres of residential housing, commerce, industry, institutions and Government.

Construction activity in the Lake St. Clair Region declined from \$92.4 million in 1951 to \$85.3 million in 1961 largely reflecting the decrease in economic activity resulting from structural changes in the automotive industry. While in 1951 the relative share of the Provincial total was 8.2 per cent by 1961 it had dropped to 4.6 per cent.

Residential construction experienced a sharp decline dropping from \$35.0 million to \$23.3 million during the ten-year period under review whereas non-residential construction showed an increase from \$57.4 million in 1951 to \$62.0 million by 1961. Although residential construction in terms of building activity has declined, the number of occupied dwellings has increased from 100,315 in 1951 to 123,581 in 1961 while occupied dwellings per capita increased from 0.27 to 0.29 during the same period.

| <b>RESIDENTIAL AND NON-RESIDENTIAL CONSTRUCTION,<br/>LAKE ST. CLAIR REGION, SELECTED YEARS 1951 TO 1965</b> |       |                                |                 |
|---|-------|--------------------------------|-----------------|
| Year  | Total | Residential<br>— \$ millions — | Non-Residential |
| 1951  | 92.4  | 35.0                           | 57.4            |
| 1956  | 108.3 | 39.9                           | 68.4            |
| 1960  | 82.5  | 30.2                           | 52.3            |
| 1961  | 85.3  | 23.3                           | 62.0            |
| 1962  | 87.6  | 19.8                           | 67.8            |
| 1963  | 99.7  | 24.9                           | 74.8            |
| 1964  | 124.6 | 38.9                           | 85.7            |
| 1965  | 162.4 | 47.7                           | 114.7           |

Since 1961, total construction increased from \$85.3 million to \$162.4

## **LAKE ST. CLAIR REGION ECONOMIC SURVEY**

million in 1965 with residential construction increasing from \$23.3 million to \$47.7 million whereas non-residential construction rose from \$62.0 million to \$114.7 million during the same period. Construction activity in the Province showed an increase from \$1,854 million in 1961 to \$2,648 million in 1965 with the Lake St. Clair Region accounting for 4.6 per cent of the total in 1961 and 6.1 per cent by 1965.

The Windsor Metropolitan Area is largely responsible for the upward trend in construction activity as it accounted for some 55.0 per cent of the regional total in 1965 with an expansion in industrial activity and institutional and government spending in this area. Sarnia and Chatham as well play important roles representing some 21.0 per cent of total construction activity in the Region.

Recent developments have in large part determined decisions made on physical expansion in the metal manufacturing industries. A number of Windsor automotive companies and related transportation equipment producers were partly influenced by the Automotive Free Trade Pact to expand existing plants or erect new buildings during the past two years. One of the more spectacular examples of the latter was General Motors' new \$20 million trim plant.

In addition, numerous plans were announced for shopping centres, large apartment and hotel buildings and other construction projects in the Windsor area. More apartments than ever are being erected in the City, while low-rental housing construction is a prominent feature of its downtown urban renewal area. Urban renewal schemes include a river-side park along the Detroit River and large development areas around the business district. The urban renewal programmes have received aid from both the Federal and Provincial Governments.

Plans for the construction of new manufacturing plants were announced during the past two years in Sarnia, Chatham, Wallaceburg, Tilbury and Amherstburg. Lambton County's major construction project is a \$218 million Thermal Electric Generating Station with an installed capacity of 2 million kilowatts, being built by the Ontario Hydro-Electric Power Commission, a project that will employ about 1,600 people at its peak. Also in the area, Imperial Oil has completed recently a new packaging warehouse, situated in Sarnia itself. Throughout the Region a number of municipalities are installing new sewer and water systems to improve existing housing facilities.

### **Residential Dwellings**

Single detached dwellings predominate in the Lake St. Clair Region, representing some 81 per cent of the total number of dwelling units which reached 123,581 in 1961, while apartments and flats are less significant than at Provincial level.

The decade from 1951 saw the number of single detached dwellings grow in significance, with their number increasing en masse from 77,000 to about 100,000. During this period, apartments actually declined in

## CONSTRUCTION, HOUSING AND HOUSEHOLD FACILITIES

number, from 17,535 to 17,486. This decline in apartments and flats took place in Essex and Kent Counties, but not in Lambton, although the proportional significance of such dwellings was reduced in all three Counties.

A noticeable trend through the 1951-1961 decade was that owner-occupied dwellings became more predominant, while tenant-occupied dwellings declined in significance, a development common to virtually all areas in the Region.

**TYPE OF OCCUPIED DWELLING, COUNTIES,  
LAKE ST. CLAIR REGION, 1951 AND 1961**

|         |      |     | Total<br>Occupied<br>Dwellings | Single<br>Detached | Apts.<br>and<br>Flats | Other |
|---------|------|-----|--------------------------------|--------------------|-----------------------|-------|
| Essex   | 1951 | No. | 57,525                         | 42,780             | 11,450                | 3,295 |
|         |      | %   | (100.0)                        | (74.4)             | (19.9)                | (5.7) |
|         |      |     |                                |                    |                       |       |
|         | 1961 | No. | 70,913                         | 55,602             | 11,342                | 3,969 |
|         |      | %   | (100.0)                        | (78.4)             | (16.0)                | (5.6) |
|         |      |     |                                |                    |                       |       |
| Kent    | 1951 | No. | 22,180                         | 17,660             | 3,185                 | 1,335 |
|         |      | %   | (100.0)                        | (79.6)             | (14.4)                | (6.0) |
|         |      |     |                                |                    |                       |       |
|         | 1961 | No. | 25,133                         | 20,875             | 2,996                 | 1,262 |
|         |      | %   | (100.0)                        | (83.1)             | (12.0)                | (5.0) |
|         |      |     |                                |                    |                       |       |
| Lambton | 1951 | No. | 20,610                         | 16,740             | 2,900                 | 970   |
|         |      | %   | (100.0)                        | (81.2)             | (14.1)                | (4.7) |
|         |      |     |                                |                    |                       |       |
|         | 1961 | No. | 27,535                         | 23,446             | 3,148                 | 941   |
|         |      | %   | (100.0)                        | (85.1)             | (11.4)                | (3.4) |
|         |      |     |                                |                    |                       |       |
| Region  | 1951 | No. | 100,315                        | 77,180             | 17,535                | 5,600 |
|         |      | %   | (100.0)                        | (76.9)             | (17.5)                | (5.6) |
|         |      |     |                                |                    |                       |       |
|         | 1961 | No. | 123,581                        | 99,923             | 17,486                | 6,172 |
|         |      | %   | (100.0)                        | (80.9)             | (14.1)                | (5.0) |
|         |      |     |                                |                    |                       |       |

### Household Utilities

During the intercensal period from 1951 to 1961, standards of household conveniences improved appreciably in the Region. Dwellings in possession of hot and cold running water increased from 74,000 or less than three-quarters of all dwellings to 113,000 equivalent to 92 per cent of all dwellings. Those dwellings without any kind of running water had dwindled to less than 4 per cent at the time of the last Census. Lambton appears to have the largest proportion of occupied dwellings with no running water. Yet even in this case, numbers had fallen by more than half over the decade.

Concerning sewage disposal facilities, 61,000 dwellings are connected to sewers. Fifty-five thousand, or some 44 per cent, possess septic tanks or cesspools, while the remaining 8,000 dwellings contain no sewage facilities whatsoever. In both Lambton County and Kent County the septic tank or cesspool is the more commonly used convenience, whereas connection to municipal sewage systems predominates in Essex County.

Exclusive usage of bathroom facilities is a privilege held by

## **LAKE ST. CLAIR REGION ECONOMIC SURVEY**

occupants in 90 per cent of all Regional dwellings, compared with 72 per cent during the 1950's. Dwellings where occupants are obliged to share bath facilities accounted for only 2.1 per cent of total dwellings, compared to 3.9 per cent in 1951, while the proportion of those possessing neither bath nor shower was drastically reduced from 24.3 per cent or more than 24,000 to a mere 5 per cent by 1961.

Hot air furnace heating constitutes the most popular heating method adopted in the Region, and became even more accepted during the 1951-1961 decade, although this method was deemed less preferable to steam or hot water in occupied dwellings in the Province as a whole. Gas has become the most widespread type of fuel, primarily at the expense of coal, oil and wood. Changing patterns in fuel consumption are illustrated by examination of the declining number of dwelling units using coal or wood. These dropped from 60,000 to 14,000 during the decade, while the number of gas users increased from 23,000 to 79,000 and that of oil users from 17,000 to 30,000. The upward trend in regional oil consumption, however, was less marked than in the Province.

Increased utilization of refrigeration is another facet indicative of the Region's rising standard of living. While in 1951 there were a little over 90 per cent of occupied dwellings equipped with refrigeration, virtually all dwellings had such facilities by 1961. Home freezers were installed in 17,000 dwellings in 1961, some 14 per cent of total dwelling units. More than 90 per cent of occupied dwellings possessed at least one television set.

Only slight differences are apparent between the Region and the Province as regards the proportion of dwellings considered to be in need of major repairs, which amounted to just 5 per cent of all dwellings in 1961.

### **Educational Buildings**

In order to prepare for an anticipated enrolment of 5,000-6,000 students by 1970, the University of Windsor is now engaged in a major expansion programme, estimated at more than \$20 million. Included in the 1963-1967 programme is the construction of a new administrative centre and buildings intended to serve such disciplines as the social sciences, business administration and fine arts, besides providing residences and recreational facilities for students.

In the spheres of public school education, extensions to school buildings have been planned for Windsor, Essex and Wallaceburg; a vocational school will be built by the Windsor Board of Education, while Howard Township is to have a central school constructed, comprising 21 classrooms. Both expansion and construction of new libraries in the Region are planned for Wallaceburg and Petrolia, while Howard Township's \$50,000 Centennial library has already been officially opened.



## **CONSTRUCTION, HOUSING AND HOUSEHOLD FACILITIES**

### **Projections**

As a result of the Automotive Free Trade Agreement between Canada and the United States, a further expansion in economic activity is anticipated in the future. Along with the transportation equipment and related industries, growth in the petrochemical industry and foods and beverages will generate increased activity in non-residential construction while residential construction will expand to accommodate the increasing population in the area.

Long-term econometric projections made by the Royal Commission on Health Services and recent studies by the Department's Economic Planning Branch estimate that total Provincial output will expand at an average annual rate of 5.75 per cent. Based on current growth patterns construction activity in the Province is expected to play a dominant role in the projected expansion in economic activity.

By 1976 it is estimated that construction activity in the Province will fluctuate around \$4,700 million in constant 1963 dollars with residential construction accounting for some \$1,700 million or 36.0 per cent of the total, while non-residential construction will range around \$3,000 million or 64.0 per cent. Recent trends in the Region indicate that construction activity will fluctuate around 6.0 per cent of the Provincial total reaching some \$280 million in terms of constant 1963 dollars by 1976. The residential sector will account for some \$93 million or one-third of total construction activity whereas the non-residential component will be responsible for some \$187 million or two-thirds of the regional total.

## TRADE

### Retail Trade

In 1961, the 4,023 retail outlets in the Lake St. Clair Region recorded sales with an aggregate value of \$396.7 million, equivalent to 6.4 per cent of the Provincial total, and representing an increase of 41.4 per cent over 1951. Reflecting the difference in the population size of the three Counties, the geographic distribution of total sales was rather uneven, Essex's share amounting to 56.5 per cent while Lambton and Kent accounted for 22.4 per cent and 21.1 per cent, respectively. Marked inequalities also become apparent when the County data are examined with respect to decennial growth. During the period under review, Lambton experienced an increase of 67.4 per cent in sales volume compared with gains of 36.5 per cent and 32.3 per cent recorded in Essex and Kent.

Turning to the municipal level, the Region's three major urban centers—Windsor, Sarnia and Chatham—accounted for almost three-fifths of the regional sales total in 1961, their relative shares being 31.5 per cent, 15.0 per cent and 11.0 per cent, respectively.

During the intercensal period, the Lake St. Clair Region and Ontario experienced an over-all growth in retail sales per capita of 16.7 per cent and 24.8 per cent, with the result that the Region's per capita sales figure rose to \$882.0, while the Province's reached \$995.3. Within the Region's constituent Counties, sales per capita rose to \$870.5 in Lambton, \$867.3 in Essex and to \$937.4 in Kent during the decade. These figures represented net gains of 22.8 per cent, 14.8 per cent and 17.1 per cent respectively, over 1951. It should be noted that per capita sales have grown more rapidly and reached a higher level in the Province than in the Region and its component Counties.

The Region's 1961 retail sales total was equivalent to an average of \$98,605 per outlet, which was \$20,395 below the comparable Provincial figure. A similar analysis of the County data reveals that the outlets in Lambton and Essex had almost identical sales averages of \$101,834 and \$101,338, respectively, as compared with Kent's comparatively small average of \$89,180.

## TRADE

Almost three-fifths, or 28.6 per cent and 29.9 per cent, respectively, of the Region's 1961 retail sales total of \$396.7 million was contributed by the outlets in the Food and Automotive Groups. Ranking next in importance were the Miscellaneous Retail Stores Group (14.5 per cent), General Merchandising (9.8 per cent) and the Hardware and Home Furnishings sector (9.8 per cent).

The importance of the contribution which these enterprises make to the regional economy becomes evident when it is pointed out that in 1961 they provided employment for 17,755 individuals, 3,388 of whom were classed as working proprietors, with an aggregate payroll amounting to \$37.3 million.

### Services

In 1961, the Lake St. Clair Region contained 2,383 service industry outlets with total receipts of some \$68 million. Essex, with its larger than proportionate share of the Region's population, accounted for 63.6 per cent of total sales while Lambton and Kent contributed 19.7 per cent and 16.7 per cent. On the county level, Lambton's increase of 105.9 per cent was the largest recorded during this period, far exceeding the gains of 59.0 per cent and 58.6 per cent experienced by Essex and Kent, respectively.

When the Provincial, regional and county service industries are compared on the basis of average receipts per outlet, the Province is leading with an average of \$36,723, while the comparable figures for the Region, Essex, Lambton and Kent are \$28,555, \$31,190, \$27,977 and \$22,022, respectively.

With 56.0 per cent of the total, the outlets in the Hotel, Tourist Camp and Restaurant Group accounted for the largest share of the industry's total receipts in 1961. Next in importance was the Personal Services sector, whose share of the industry's total sales amounted to 15.3 per cent. The balance, 28.7 per cent, was divided somewhat unevenly between the six remaining groups: Amusement and Recreation (8.1 per cent), Business Services (8.1 per cent), Miscellaneous Services (5.0 per cent), Repair Services (3.5 per cent), Funeral Services (3.2 per cent) and Photography (.8 per cent).

The significant role which this industry plays in the economic life of the Region is evidenced by the fact that in 1961 it provided permanent income for 2,277 working proprietors and 7,566 employees, with wages and salaries totalling \$16.8 million.

### Wholesale Trade

The total value of the transactions recorded by the Region's 811 wholesale trade outlets in 1961 was \$308 million. Equivalent to 5.0 per cent of the corresponding Provincial aggregate, regional wholesale volume experienced an increase of 15.7 per cent over 1951. Closer analysis reveals that 52.4 per cent of the total was accounted for by Essex, 29.2 per cent by Kent and 18.4 per cent by Lambton. Their rank is reversed,

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

however, when growth of sales is used as the criterion, since during the period under review Lambton experienced an increase of 79.4 per cent, while Kent and Essex recorded gains of 20.7 per cent and .1 per cent, respectively.

With an average of \$379,727 in sales per outlet in 1961, the wholesale trade industry in the Lake St. Clair Region ranked well below the Provincial industry, with a comparable figure of \$606,253 per establishment. When the county data are examined, the average wholesale location in Kent had sales of \$424,174 per annum, while in Essex and Lambton the averages were \$384,002 and \$317,055, respectively.

In addition to performing an important intermediary trade function, the industry creates a considerable number of employment opportunities: in 1961, it provided income for 5,124 workers receiving \$19.8 million in wages and salaries.

### Summary and Outlook

The number of retail outlets in the Region increased from 3,681 in 1951 to 4,023 by 1961 with a rise in sales from \$280.6 million to \$396.7 million during the decade. While retail sales in the Lake St. Clair Region increased in absolute terms, the relative share of the Provincial total declined from 6.8 per cent in 1951 to 6.4 per cent by 1961 reflecting the moderate economic activity in the Region during the second half of the ten-year period under review. Per capita retail sales, however, showed an appreciable rise from \$755.8 in 1951 to \$882.0 in 1961, although remaining below the Provincial levels of \$895.3 and \$995.3, respectively. The relative proximity of the Region to the United States and particularly the Detroit area in part account for the lower per capita sales.

| <b>RETAIL TRADE STATISTICS,<br/>LAKE ST. CLAIR REGION AND PROVINCE, 1951 AND 1961</b> |                     |                            |                           |
|---|---------------------|----------------------------|---------------------------|
|   | Number<br>of Stores | Retail<br>Sales<br>\$000's | Per Capita<br>Sales<br>\$ |
| 1951—Region   | 3,681               | 280,591.4                  | 755.8                     |
| Ontario   | 50,119              | 4,116,372.5                | 895.3                     |
| Region as % of Ontario  | 7.3                 | 6.8                        |                           |
| 1961—Region   | 4,023               | 396,688.9                  | 882.0                     |
| Ontario   | 52,157              | 6,206,684.5                | 995.3                     |
| Region as % of Ontario  | 7.7                 | 6.4                        |                           |

Based on past and current trends in the Province, it is expected that retail sales will continue to account for a significant portion of personal income. By 1976, it is estimated that retail sales in the Province will reach some \$13.1 billion in constant 1961 dollars while the Region's share in the Provincial total will fluctuate around 6.9 per cent or \$905 million in constant 1961 dollars. Based on the Department's population projections, per capita retail sales will reach some \$1,500 in the Province

## **TRADE**

and \$1,460 in the Region, in terms of constant 1961 dollars. The whole-sale trade volume in the Lake St. Clair Region is expected to follow a similar pattern during the forecast period.



## TOURIST TRADE

Endowed with the warmest climate in Eastern Canada, miles of sandy beaches, an unusually rich historical heritage and a location which is readily accessible to millions of people in both Canada and the United States, the Lake St. Clair Region attracts thousands of tourists each year. Although tourist expenditures account for only a small proportion of the total regional income they nevertheless create a considerable number of employment opportunities. Reflecting the gradual decrease in the length of the average work week and the steady increase in the propensity to travel, the tourist industry is likely to occupy an even more prominent position within the regional economy over the next decade than is currently the case.

### **Historical Background and Attractions**

A brief review of the early history of the Lake St. Clair Region explains why historically-minded tourists find visits to this part of the Province to be particularly rewarding. The first point to be noted in this connection is that it was probably among the first inland parts of the continent to be visited by Europeans, since there is good reason to believe that Champlain and Brûlé traversed the district during the early years of the seventeenth century. The next such visit took place in 1669 when La Salle arrived, accompanied by several missionaries. A few years later he returned in his famous ship, *The Griffon*—the first vessel to ply the Great Lakes above Niagara Falls.

The first permanent white settlement in the Region came into existence around 1750 on a site located in the present day Town of Ojibway. Its development was a consequence of the policy of the French authorities in Detroit to encourage farming in the district in the hope of obtaining thereby a source of supply for their other outposts. The influence of these early settlers, with their long, narrow farms, can be detected even today in the street pattern of the City of Windsor. Similarly, motorists using King's Highway No. 39 (The Lake St. Clair Trail) are confronted with visible evidence of the district's French background in the form of a number of communities which, as in the Province of Quebec, centre about

## TOURIST TRADE

a beautiful Roman Catholic Church.

With the defeat of Montcalm's army at Quebec in 1759 virtually all of France's North American possessions passed into British hands. Unfortunately, the Indians who lived on the banks of the Detroit River found the British officials and traders who moved into the district in the following years to be less to their liking than their French predecessors. In 1763 this resentment gave rise to the famous Pontiac Company—an uprising led by Chief Pontiac which would probably have resulted in the capture of Detroit had the British not been forewarned.

It is interesting to note that during the three year period when Detroit was under siege, Pontiac attempted to obtain the food which his forces required by granting land to the French settlers on the Eastern shore of the River. Visitors to the Hiram Walker Historical Museum in Windsor are privileged to see one of these deeds—the only document in existence, as far as is known, bearing Pontiac's signature.

The impact of the American Revolution on the Region was quite substantial since it resulted, first of all, in the transfer of the British administrative capital from Detroit to a site on the Canadian side of the River. Thus was born the Town of Sandwich, the first urban settlement in South-western Ontario. In addition, it led to the establishment, in 1796, of Fort Malden and to the founding, in the same year, of the nearby Town of Amherstburg. Fort Malden is now a National Historic Park where tourists, in addition to inspecting the Fort's earthworks, may tour museums containing a number of fascinating items relating to the early history of the district.

The most important consequence of the American Revolution, from the point of view of the Region's social and economic development, was the arrival of thousands of United Empire Loyalists—a hardy group of settlers who, moving inland along the St. Clair, Sydenham and Thames

**Fort Malden, Amherstburg.**

*—Courtesy—Ontario Department of Tourism and Information.*



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

Rivers, quickly carved homesteads and settlements out of Southwestern Ontario's damp and heavily forested wilderness.

Just as the Region's proximity to the United States had made it a favoured place of refuge for the Loyalists, so, during the War of 1812, it made it the scene of a number of important military engagements. The impact of this war was felt almost immediately in the Region because in 1812 the Americans struck across the Detroit River, landing at Walkerville, a part of present-day Windsor, and occupied the surrounding territory.

It should be pointed out here that during their brief occupation of this district the Americans used the home of a British officer, Colonel Francois Baby, as their headquarters. Still in existence, this building is now known as the Hiram Walker Historical Museum and houses an outstanding collection of personal and official documents as well as artefacts of the Indian and colonial periods.

Having compelled the American army to retreat across the River, a British and Canadian relief force under the command of Major-General Isaac Brock then proceeded to capture Detroit. A cairn now marks the spot on McKee's Point from which this attack was launched. However, an American naval victory on Lake Erie during the following year made Brock's position untenable and enabled the American forces to recapture a large portion of Southwestern Ontario, including Fort Malden. They continued to occupy this territory until the Peace of Paris ended the war on Christmas Eve, 1814.

The British and Canadians effected their withdrawal from the Region by retreating along the Thames River, fighting rearguard battles as they went. One such engagement took place at a site in the present City of Chatham which is now known as Tecumseh Park. This name, it should be pointed out, was chosen to honour the memory of a great Shawnee Chief-tain who made an important contribution to the defence of Canada's Western frontier during this War. The Tecumseh Cairn in the Indian Reservation on Walpole Island marks his last resting place.

Another, more significant, battle was fought shortly afterwards at Moraviantown (Thamesville), farther up the Thames. It resulted in the death of Tecumseh and the defeat of the British General, Proctor. Another noteworthy consequence of the Battle of Moraviantown was the complete destruction of a Moravian mission to the Delaware Indians which had been established in 1792. This site is now known as Fairfield Village and is occupied by a museum which contains a number of interesting relics of the pioneer period.

Also worthy of mention in any discussion of the Region's historical background is the fact that it was the scene of the Battle of Windsor, one of the last engagements in the so-called "Patriots War" between American-based followers of William Lyon Mackenzie and Government troops. Fought in the early hours of Dec. 4, 1838 in and around the Francois Baby

## TOURIST TRADE

Estate, this battle ended in the rout of the 'patriots'. The site of this engagement is now marked by a tablet.

The early history of the Lake St. Clair Region was also greatly enlivened and enriched by the discovery of oil in Enniskillen Township, Lambton County in 1857. Later that year North America's first commercial oil well went into production in the Town of Oil Springs, southeast of Sarnia. This town is now visited each year by thousands of tourists who come to see "The Story of Oil" in the Oil Museum of Canada. Nearby Petrolia is also a source of great interest to tourists since it was Canada's first Oil Capital and was at one time the home of fifteen oil refineries.

Visitors to this part of Lambton County will immediately realize, however, that the oil industry is still a vital factor in the Region's economy, since oil rigs, many more than a century old, can be seen in operation at a number of locations.

The importance of the 1850's in the history of the Region also derives from the fact that it was during this decade that the Region experienced its first influx of fugitive slaves from the United States. Spirited out of that country by the famous "Underground Railway," these slaves were responsible for the establishment of several communities in the Counties of Essex and Kent. Typical of these were South Buxton, near Chatham, New Canaan, southwest of Essex (town) and Elgin, in Raleigh Township.

By far the best known slave to find freedom in this country was the Reverend Josiah Henson, whose ordeal as a slave prompted Harriet Beecher Stowe to write her famous novel "Uncle Tom's Cabin". Settling in the Town of Dresden, he there established a Manual Labour School for the purpose of training fugitive slaves. His grave is located there and is visited by a considerable number of tourists each year, as is his home, which contains many interesting relics relating to his work.

The link between the Region and the slavery controversy was further strengthened in 1858 when John Brown, the fiery abolitionist leader who was later executed for his part in the raid on Harper's Ferry, visited Chatham in search of support for his plan to overthrow the allegedly pro-slave government of President Buchanan. During his brief visit there Brown drafted a new constitution for the United States and formed a Provisional Government. Two buildings in Chatham help to keep alive the memory of this incident: his temporary lodging on King St., and the First Baptist Church, the site of the closing sessions of the constitutional convention.

The above discussion provides only a partial list of the historical attractions to be found in the Region. Among the other museums which deserve mention are the Chatham-Kent Museum (Chatham), the Pilot House Museum (Corunna), the Forest-Lambton Museum (Forest), the Eisenbach Museum (Grand Bend), the Rondeau Provincial Park Museum (Morpeth) and the Antique Car Museum (Watford). Of related interest is Bayview Park in Point Edward. It contains an old steam locomotive and a



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

Spring Pole Drill Rig which was used to drill for oil about one hundred years ago.

Historical sites not yet mentioned include the plaque on King's Highway No. 40, north of Wallaceburg, where Lord Selkirk's Scottish settlers established themselves in 1804 and the cairn at Trinity Church, east of Morpeth, which perpetuates the memory of Archibald Lampman, one of Canada's greatest poets.

It should also be pointed out that stately old homes abound throughout the Region. In addition, a number of churches dating back to the nineteenth century can be found there. Typical of these is Christ Church, Bellevue, in Amherstburg, which was built in 1818-19. Of architectural interest is St. Mary's Anglican Church in Windsor, reputed to be one of the finest examples of perpendicular Gothic architecture on the Continent.

The University of Windsor, dating back more than two hundred years to 1748, when Father Armand de la Richardie founded a Jesuit mission for the Huron Indians, will also be of interest to tourists with a sense of history. The Assumption College building, the oldest structure on the campus, was completed in 1857. It is of interest to note that during the Fenian Raids British troops were garrisoned in this building in readiness for an expected American invasion. In addition to housing older, traditionally-designed buildings such as this one, however, the Campus also

St. Mary's Anglican Church, Windsor.

—Courtesy—Ontario Department of Tourism and Information.







Assumption College, Windsor.

—Courtesy—Ontario Department of Tourism and Information.

contains a number of new, modern structures since the University is now in the midst of a \$28,000,000 capital expansion programme.

### **Recreational Facilities**

A considerable number of the tourists who visit the Lake St. Clair Region each year are attracted by its excellent outdoor recreational facilities. These include, in addition to hunting and fishing areas, beaches, golf courses, toboggan and ski slopes, nature trails, camping grounds and picnic areas. Beaches occupy a particularly prominent position in this listing since the Region has the warmest climate in Eastern Canada and is bounded by water on three sides.

Many of the best recreation areas in the Region are to be found in its six Provincial Parks: Clay Creek, Holiday Beach, Ipperwash, Pinery, Rondeau and Wheatley. With a total area of approximately 17,000 acres these parks, in 1966, attracted more than 1.4 million visitors.

Clay Creek, the smallest of the six, is located on the banks of the St. Clair River. Although it lacks a beach the Park does have fine picnic and camping facilities and a dock for small craft. In addition, it boasts an excellent view of the Great Lakes Navigation Route.

Pinery and Ipperwash Provincial Parks are both located on the shores of Lake Huron. The former is popular in both summer and winter since it has facilities for swimming, boating, bird-watching, hiking, skiing, sledding and open air skating. Like the nearby Walker Hills ski development, it has both ski tows and equipment for producing artificial snow.

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

Considerably smaller than Pinery, Ipperwash is noted primarily for its fine sandy beach. It should also be pointed out, however, that visitors to this Park are always interested by the large, round rocks of unknown origin which dot the shoreline.

The remaining Parks, Holiday Beach, Wheatley and Rondeau are on the shore of Lake Erie. Swimming and duck hunting are the activities for which Holiday Beach is best known. Wheatley, on the other hand, is still under development.

Rondeau Provincial Park is distinguished both by its splendid beaches and by the fact that it contains one of the few examples in Canada of natural stands of the Mississippi Southern Hardwood Forest Type. This forest association extends into Ontario only along the Lake Erie Shore and includes such species as the tulip tree and the magnolia. In addition, Rondeau has become famous as a bird migration observation point.

The Lake St. Clair Region is also the home of Point Pelee National Park—a six square mile haven for vacationers located on the southernmost tip of the Canadian mainland. Famous for its fine silvery beaches, this Park also succeeds in attracting a large number of visitors each year who are interested in hiking, camping, fishing, particularly smelt fishing, and wildlife observation. The Park is particularly well-suited for the latter activity since it contains an animal and bird sanctuary and a wooden walkway which extends out over the marsh for a considerable distance.

Approximately fifteen miles southwest of Point Pelee National Park lies another of the Region's major vacation areas, Pelee Island. The former summer home of three American Presidents (Taft, Harding and Cleveland), Pelee is exceedingly popular with pleasure boat operators, thousands of whom visit its pleasant bays and make use of its excellent docking facilities every summer. Air and water connections with both the United States and Canada provide easy access for the thousands of other visitors who come each year to swim, fish, hunt or to simply enjoy the flavour of island life.

The island's popularity with hunters is, to a considerable extent, a consequence of the annual Pelee Island Pheasant Shoot, organized by the Ontario Department of Lands and Forests. The 1963 Shoot attracted slightly more than 1,000 hunters and resulted in the bagging of approximately 8,500 birds.

Mention should also be made in any survey of the Region's recreational facilities of the four parks operated by the Sydenham and Ausable Valley Conservation Authorities. The former organization maintains a seventeen acre park one mile northeast of the Town of Shetland, while the latter operates parks with a total area of forty-nine acres near the Towns of Thedford, Port Franks and Arkona. Probably the most interesting of the four is Rock Glen Park, north of Arkona, since its attractions include both a scenic waterfall and fossil beds containing specimens

## TOURIST TRADE

more than 280 million years old.

Lying as it does, directly in the path of the migratory birds which every spring and autumn make their way between Canada's sub-arctic regions and the southern United States, the Region offers excellent opportunities to both duck and geese hunters and naturalists. The former are drawn to the Rondeau, Holiday Beach and Walpole Island areas, while the centre of interest for the latter is Jack Miner's world famous bird sanctuary, three miles north of the Town of Kingsville. The sanctuary has welcomed several million visitors since its inception in 1904 and consequently ranks as one of the Province's greatest tourist attractions. In the spring and autumn as many as 10,000 people gather at a time to watch the late afternoon and evening flights.

In addition to serving as a tourist attraction the Miner Sanctuary also concerns itself with the important task of studying the migratory behaviour of Canada geese. To this end, its experts trap and band a large number of the more than 30,000 geese which marshal there during the migratory periods.

Bob-Lo Park, situated on Bois Blanc Island, opposite Amherstburg, is also very popular with tourists. Its attractions include picnic areas, playgrounds, amusement rides and a scenic, three mile tour of the island on a miniature train. They annually draw more than 750,000 tourists, a large proportion of whom are Americans. During the summer months the island is linked with Detroit and Amherstburg by regular boat service. It

**Canada geese at the Jack Miner Bird Sanctuary near Kingsville.**

*—Courtesy—The Globe and Mail.*





## LAKE ST. CLAIR REGION ECONOMIC SURVEY

is also accessible to pleasure boat operators, however, since it has one of the finest marina's on the Detroit River.

### General

The attractiveness of the Lake St. Clair Region to tourists is also attributable to its high level of urban and industrial development. Visitors to the Sarnia district, for example, are always fascinated by its complex of petroleum refineries and chemical plants. Impressive enough at any time, it is doubly so in the evening when the flares are more plainly visible. Among the internationally known companies located there are Dow Chemical of Canada Limited, Imperial Oil Limited, Polymer Corporation Limited and Sun Oil Company Limited.

Similarly, Windsor's position as the Automobile Capital of the Commonwealth makes it a source of considerable interest to tourists since many of the companies in the industry offer group tours of their facilities. Typical of these are Chrysler Canada Limited and McKinnon Industries Limited, a subsidiary of General Motors. Also open to adult visitors is the plant of Hiram Walker and Sons Limited, one of the world's best-known distillers.

As Canada's tenth largest metropolitan district Windsor also offers a wide range of opportunities for tourists interested in shopping, night-life, fine restaurants and cultural attractions. Those in the last category find the Willistead Art Gallery, formerly the Hiram Walker Estate, much to their liking, since it contains an excellent and rapidly growing collection of Canadian art. Tourists who enjoy the attractions to be found in large urban centres are also drawn to the Windsor district, however, by the fact that it lies within a few minutes drive of Detroit, one of North America's largest cities.

A visit to the Detroit-Windsor area is particularly rewarding during the first four days of July, that is to say, between Canada's Dominion Day holiday and the American Independence Day holiday since every year during this period these two cities stage a joint celebration known as the International Freedom Festival. An extremely ambitious undertaking, this celebration involves parades, cultural and sports events and a spectacular fireworks display launched from barges in the middle of the Detroit River. The last attraction, it is interesting to note, is the largest annual display of its kind in North America and is usually witnessed by more than 500,000 people.

## COUNTIES AND MUNICIPALITIES

### ESSEX COUNTY

Although Essex County has the smallest land area of the Region's three Counties, some 452,480 acres in all, it has one of the largest populations in the Province of Ontario — 258,000 in 1961, estimated at 277,000 in 1966. This population is dispersed over a city, six towns and two villages.

While most of the Region is underlain by black slate, Essex County has a limestone bedrock, which actually outcrops on Pelee Island. The whole of Essex County is included in the St. Clair Clay Plains. The Essex Plain covers almost all of the County, and is a till plain which is modified by post-glacial wave erosion and lake-deposition. While the area is level, natural drainage is, to a certain extent, created by slight terrain undulations. This is further improved by artificial drainage.

### Historical Background

The County's first white settlers were of French origin, and consequently some one-fifth of Essex' population have a French background. During its early days, this frontier County was known as the Detroit River Region, a twenty-by-thirty mile rectangular peninsula whose south, west, and north shores meet the waters of the Detroit River, Lake Erie and Lake St. Clair. It is the only locality in the Province of Ontario that can lay claim to a continuous settlement antedating the British conquest. Although American areas were explored before 1700, settlement came later, and around the mid-eighteenth century French settlers began clearing the first ribbon-like farms on the east shore of the strait. By the late 1780's one hundred and fifty farm lots covered the frontage from a point four miles below La Riviere aux Dindes to Lake St. Clair. That the area represented land worth having has been enthusiastically noted by Lajeunesse ". . . by the close of the seventeenth century the Detroit River region, no man's land between the English and Iroquois on the one hand, and the French, Algonquins and Hurons on the other, had been sufficiently explored and visited to make both the French and the English burn with desire to occupy that most beautiful and strategic position on the world's finest system of interior waters."



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

Little wonder that after the French flag was unfurled in Detroit, and then likewise, the English flag, after the recognition of United States independence under the terms of The Treaty of Paris in 1783, the frontier region on the other side of the River beckoned to United Empire Loyalists. Such a movement was further strengthened by the Constitution Act of 1791, witnessing the emergence of Upper Canada. However it was not until 1796 that the Stars and Stripes actually replaced the Union Jack, rendering the Detroit River in fact the political boundary between the United States and Canada, and thus considerably increasing the population of this area.

The year after the Constitution Act saw Essex County emerge as an official distinct entity, under a proclamation of July, 1792 dividing the Western District into the Counties of Kent, Essex, and Suffolk. Essex County, named by Governor Simcoe, had as its boundaries Lake Erie from Pointe aux Pins to the Detroit River, on the south; on the west it was bounded by the Detroit River to Maisonville's Mill, thence to a line running parallel to the Detroit River and Lake St. Clair for four miles until reaching the River Thames, by which it travelled up the river to Pointe aux Pins. These boundaries of Essex lasted until the end of the century, when a new proclamation was issued. This Act, introduced on January 1st, 1800, effected a better division of the Province of Upper Canada.

Since attaining this status, Essex has developed to a stage where more than 85 per cent of its inhabitants are urban-dwelling. Thus the area possesses a high population density—365 people to the square mile, far in excess of the two other regional Counties. Racially and ethnically diversified, the majority population consists of Caucasoids, the remainder including Negroes and Indians. The French-Canadian population, basically concentrated in Metropolitan Windsor, has experienced a natural increase rather than one effected by migration. During the decade 1951-1961 the County experienced a net population growth of about 19 per cent.

### **Manufacturing**

Manufacturing in the County gives employment to one-third of the labour force. Almost 520 manufacturing establishments were in business during 1962, producing nearly half the Regional manufacturing output. Nearly one hundred of these establishments are engaged in food and beverages production, and almost twice as many in transportation equipment. The automotive industry is by far the leading industry in the County with the result that population growth during this century appears to have been closely correlated to the fluctuations in automobile production. The Windsor area is most noted as the centre of the automobile industry, situated as it is in a strategic international position. Consequently three-quarters of Essex' labour force work here, while the large number of high-paying assembly jobs gives the County claim to the fourth highest average manufacturing income per worker in the whole Province.

# ESSEX COUNTY



Township Boundaries

Railways

Main Highways

4 Lane

2 Lane

Air Bases

Provincial Parks

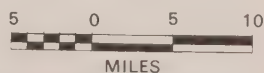
Population

Over 7000

2000 – 7000

1000 – 2000

Under 1000





## COUNTIES AND MUNICIPALITIES

### **Agriculture**

The importance of Essex food processing industries, in Windsor, Leamington and Harrow among other centres, underlines the County's agricultural importance. Essex County has the most favourable climate in the Province for agricultural production, possessing, in Pelee Island, Canada's most southerly tip. The County has about 452,000 acres of farm land occupied by some 4,900 farmers. It experiences the longest growing season in Canada—extending between 203 and 213 days in duration. The light textured soils are particularly good for horticultural crop growing, while generally the favourable soil and climatic conditions allow the successful production of a large variety of cash crops, such as corn, winter wheat and tomatoes. In 1961, 35 per cent of the County's farm income was derived from vegetable and greenhouse products, 31 per cent from livestock and livestock products while field crops accounted for 31 per cent. Vegetable production in 1964, valued at \$6.4 million, represented one-quarter of Ontario's value of vegetable production, while the County contains the largest and most intensive greenhouse vegetable growing area in Canada, covering one-half of the Province's total greenhouse area.

Although Essex County's pasture land has been steadily reduced, the beef cattle industry has experienced appreciable expansion. Farms in the County are highly mechanized, and the years since 1961 have witnessed a steady rise in agricultural land prices.

### **Scenic Sites**

The County has a considerable number of locations of historical interest, derived from a history dating back a few centuries, with the first permanent white settlement coming into existence around 1750 at the Town of Ojibway. Early communities include the Town of Amherstburg, New Canaan and the Town of Sandwich, while buildings of architectural interest can be found in Windsor, particularly on the University campus. One of the Region's six Provincial Parks, Holiday Beach, is in Essex, while Point Pelee National Park, also an outdoor recreation spot with miles of sandy beaches, acts as a gateway to the popular Pelee Island. A prime tourist attraction in the County is Jack Miner's famous bird sanctuary near Kingsville, a viewing point for millions of people over the years.

### **Transportation and Communication**

Being located at the heart of the Great Lakes industrial complex, few difficulties are encountered by Essex County in the way of transportation facilities. All regional railways, both freight and passenger, serve the County. Service includes a daily freight connection with Buffalo, New York State. The County's roads are largely urban and the area is served by thirteen King's Highways. The major route, the Macdonald-Cartier Freeway, runs through to Quebec from Windsor, a development in keeping with the increased number of cars emerging on the Continent's roads each year, and with the intensive industrial development of the Windsor-



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

Montreal linear belt.

Eighteen communities in the County are served by trucking companies, some operating on an international scale. Water transport is facilitated by seven shipping ports, loading and unloading such freight as chemicals, oils, sand and gravel, bituminous coal and salt, each of which holds significance for the regional economy. At most of the ports, the trend has been toward increased coastwise traffic, measured by total tonnage. Windsor, situated as it is on the busy Detroit River, is the most important. The two waterways used for commercial purposes are the Detroit River and Lake St. Clair itself. Air transport is obtainable at Leamington, Pelee Island and Windsor, the latter serving major airline routes. Gas pipelines run through the County, while the County's crude oil output has increased due to the discovery of several new oil fields since the 'fifties.

Essex County is served by four independent telephone systems and the Bell Telephone Co. which accounts for some 97 per cent of the total number of telephones in operation. Five radio stations, one television station and eight newspapers provide communications media for the County.

**The City of Windsor** (assessed population, 1965: 185,958) acts as Essex County's administrative centre, and is the Region's largest community. With an estimated population of 206,000, its Metropolitan Area ranks tenth in Canada.

Before the white man arrived on the scene, Indian villages were located at the river's narrowest point. The French erected their Detroit fort in 1701, followed by settlement along both banks of the Detroit River, remaining after the British took over in 1763. When the fort was given to the Americans in 1796, many settlers moved to the Canadian side. Here, Sandwich became the administrative centre. Windsor developed immediately opposite to Detroit, at 'The Ferry'. In 1857 Windsor and Sandwich both became incorporated as towns, and since Windsor became the railway terminal, it grew rather quickly in size. Walkerville became established in 1858, and gained town status in 1890. Two years later Windsor, now having a population of 10,000, was made a city. Ford City was founded in 1904. It then became a town in 1915 and later was incorporated as the City of East Windsor in 1929. In 1935 the "Border Cities", as they were known, were amalgamated as the City of Windsor with more than 100,000 inhabitants. On January 1st, 1966, Riverside, Sandwich East Township and Ojibway were annexed to the City of Windsor.

Being situated on the Detroit River, opposite the car capital of the United States, Windsor is served by all the Region's railways, functioning as their focal point and by Highways 2, 3, 18, 39, 98, and the Macdonald-Cartier Freeway. This Freeway, spanning an important stretch of Canadian territory, gives the city access to major Canadian markets in the East.

## COUNTIES AND MUNICIPALITIES

Interesting buildings in Windsor include the Hiram Walker Historical Museum, which houses a fine collection of personal and official documents, besides relics from the Indian and Colonial times, and Willistead Art Gallery, concentrating on the accumulation of Canadian works. St. Mary's Anglican Church represents a celebrated example of perpendicular Gothic in North America. The University itself dates back to 1748, while Assumption College is the campus' oldest remaining building, completed in 1857. As such, a contrast is provided between the old and the new, the latter taking shape in the form of a \$28 million building expansion programme, well advanced at the time of publication.

Windsor's location in relation to Detroit and relative nearness to Toronto also renders it an industrial center of considerable importance, a fact well emphasized by its own automotive industry, the spearhead of Canada's automobile producers. Out of a total manufacturing labour force in 1965 of approximately 36,000, as many as 22,700 were working in the automotive industry. The industry's 'big three', Chrysler, G.M. and Ford account for more than 14,000 of the Windsor work force. In addition, Windsor has many companies either directly manufacturing transportation equipment or supplying those industries—such as the metal fabricators and the primary metal companies that supply various components and parts for the assembling of a complete automobile. In 1962 Windsor's 289 establishments produced three-quarters of the County output and 37 per cent of the Lake St. Clair Regional total.

**Assumption University, Windsor.**

*—Courtesy—Ontario Department of Tourism and Information.*



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

The Chrysler and Ford plants are both big employers, the former being the largest in the Region, while the McKinnon plant of General Motors shares third place with Hiram Walker. Thus, from small beginnings, in 1904, Windsor's automotive industry has grown into one that conditions the welfare and livelihood of many thousands of families residing in the area. The Hiram Walker Walkerville plant acts as head office for its complete international organization, famed for its whiskeys and gin.

In the field of education, the Windsor area has fifteen secondary schools, one hundred and twenty primary schools, the Western Ontario Institute of Technology, the University of Windsor and a Teachers' College.

The City at present is in the midst of a number of urban renewal programmes, embracing plans for shopping centres, huge apartment complexes and hotel buildings. Particular features of the programme, supported by both Federal and Provincial authorities, are plans for a riverside park along the Detroit River, and low-rental housing. With respect to housing in general for the Metropolitan Area, construction began on 1,125 dwelling units in 1964, while builders completed work on 919 units, a considerably more active phase than in 1960. Expansion on the University campus should enable between five thousand and six thousand students to study there by 1970, while extensions to school buildings have already been planned. At the same time a vocational school is scheduled for construction.

**Amherstburg** is situated eighteen miles south of Windsor, along the Detroit River. With an assessed 1966 population of 4,400, the community is situated on highway 18, and served by the New York Railway System. It is a seaway port with a Department of Transport Wharf and Warehouse, a Navigation Aids Depot and Customs and Excise facilities, providing a Customs service on dock during the summer months for the purpose of small boats from the United States. At the port, 41.7 thousand cargo tons were loaded in coastwise shipping in 1964. Commodities were composed largely of chemicals and general cargo. In foreign shipping, 192.5 thousand tons of cargo were unloaded, comprising primarily bituminous coal and some limestone, while just 125 tons of machinery were loaded.

The Amherstburg area is the site for Fort Malden National Historic Park. Occupation of the land goes back as far as 1727, but the first permanent white settlement sprang up in 1784. Twelve years later a new military site became re-established by the British and came to be known as Fort Amherstburg or Fort Malden. Also in 1796 a townsite was laid out and occupied by Loyalists from Detroit. The fort served as a British base during the War of 1812, the year in which Detroit was captured. Once more it played a part in North American history, in 1838, when its garrison and the local militia repulsed four attempts by the "Patriot" filibusters to invade Canada in the Detroit River frontier. Until 1851 Fort Malden



## COUNTIES AND MUNICIPALITIES

was garrisoned by British regiments, after which it was occupied by retired soldiers. This situation lasted up to 1859 when the Fort was abandoned.

In 1851 the municipality of Amherstburg separated from the township of Malden, becoming a village in possession of town powers. It became officially incorporated as a town in 1878. The town's industrial sector, though small is quite varied. Manufacturers engage in whiskey distilling ("Lord Calvert", "Calvert's Grand Prix", etc.), canning, automotive parts, industrial chemicals and stone quarry operations. Adjacent salt and limestone deposits are utilized in the manufacture of soda and clay products. At aggregate level, the town's manufacturing output value accounted for 4 per cent of Essex County's manufacturing activity in 1962, with a selling value of factory shipments amounting to \$22 million.

**Leamington** (assessed population, 1966: 9,379) is located on Lake Erie, 30 miles south east of Windsor, at the heart of an area known as the "Sun Parlour of Canada" by virtue of its climate. An interesting feature of the town's early history is that during the nineteenth century Leamington became a refuge for negro slaves fleeing the United States, many of whom continued further along the road to settle at Chatham, site of the area's main negro settlement.

Both soil and climate are conducive to the production of canning vegetables and high-quality hothouse and field crops. Leamington has thus become the home of the Commonwealth's largest tomato processing plant, owned by H. J. Heinz of Canada, a concern employing more than 3,000 people. Heinz products include such items as baby food, tomato ketchup and soups. During 1962 the town's 20 manufacturing establishments generated an output value of \$53 million, representing 9 per cent of the Essex County total and 4 per cent of Regional manufacturing production. Served by Highways 3, 18, and 77, Leamington is also on the Chesapeake and Ohio railway route, uniting the town with Windsor to the west and Toronto to the east, and on the New York Central System's fourteen mile Leamington Branch line, linking Leamington with the System's main line at Comber. Its port handled 1.3 thousand tons of foreign shipping cargo in 1964-65 and 4.8 thousand tons of coastwise shipping cargo, mainly food preparations and general commodities.

**Essex** (1966 assessed population of 3,600) is a small town on Highway 3, fifteen miles east of Windsor, served by the New York Railway. Once a lumbering community known as Essex Center, its few industries are now primarily engaged in the processing of foods and beverages, and the manufacturing of auto parts and other metal products.

**Kingsville** is another small town of 3,500 inhabitants. Jack Miner's Kingsville Bird Sanctuary on Highway No. 18, previously referred to, has endowed the vicinity with national fame. Birds at this Sanctuary are banded by the unorthodox method of biblical quotations. Served by Highways 3, 18 and 401, and by the Chesapeake and Ohio Railways, the

## **LAKE ST. CLAIR REGION ECONOMIC SURVEY**

town's industry is basically comprised of tobacco farms and food and dairy producers.

### **KENT COUNTY**

#### **History**

The municipal history of the County of Kent began with Governor Simcoe's proclamation in 1792 dividing Upper Canada into nineteen counties. However, not until 1841, was provision made for municipal government, and even then Kent was joined with Essex and Lambton to form what was known as the Western District.

Kent county has two most interesting settlements founded in its earliest days—the Baldoon Colony founded by Lord Selkirk in 1803, and the Moravian Mission Station at Moraviantown.

#### **Economic Activity**

The economy of the County is largely agriculture-oriented, with a fair degree of industrial development, much of the industry being based on agriculture.

The County consists of ten townships and has frontage on Lake St. Clair in the northwest, and Lake Erie on the south. The River Thames flows through the County in a southwesterly direction emptying into Lake St. Clair, while the Sydenham River crosses the northwest corner of the County. Administration of conservation of these two water sheds is the responsibility of the Lower Thames Valley and Sydenham Conservation authorities.

Kent County has approximately 550,000 acres of farm land, which supports 4,759 farmers (1961 Census). In 1964 the gross value of farm production amounted to 75 million dollars.

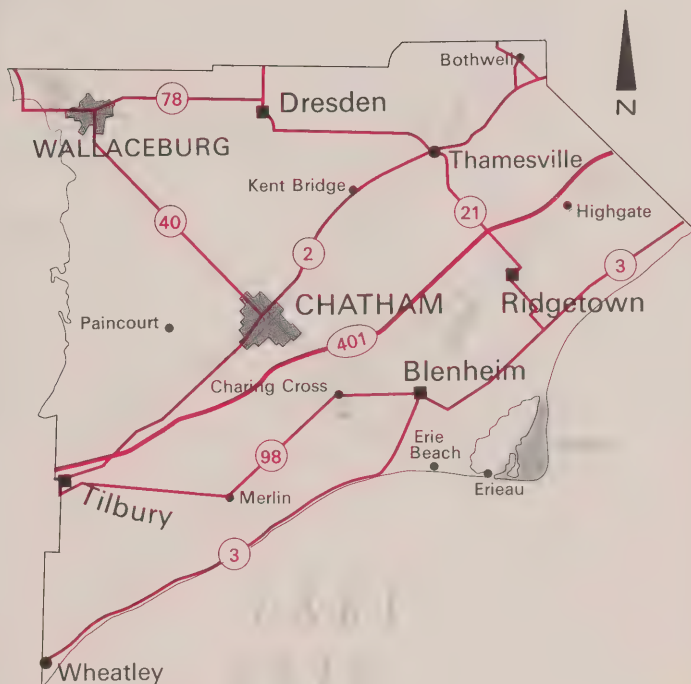
Commercial grain production is the backbone of Kent's agriculture with gross annual production in excess of \$30 million. Grains, such as corn, soybeans, winter wheat, oats, winter barley and white beans account for most of Kent's productive acreage.

Corn represents the most important crop in the County. Each year some 125,000 acres of corn is on demand by starch companies, distillers, breakfast food manufacturers, feed manufacturers, or used directly on farms. About forty five per cent of the Canadian production of soybeans originates in Kent County while over one-third of Ontario's tomato output is grown in the County as Kent's fertile soils show average yields of 19 to 20 tons per acre. Specialized crops, such as sugar beets, tobaccos, cucumbers, strawberries and apples are also grown commercially.

Livestock is an important aspect of Kent's agriculture as approximately 25 per cent of total farm incomes in the County is derived from the sale of livestock and livestock-products. Corn-finished cattle from Kent are in strong demand by packing houses while hog production is equally important with the County ranking third in Ontario's total output. Most of the milk produced supplies the urban areas in the County. Production of



# KENT COUNTY



## Population

Over 7000



2000 - 7000



1000 - 2000



Under 1000



## Township Boundaries

Railways



Main Highways

4 Lane



2 Lane



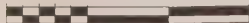
Air Bases



Provincial Park



5 0 5 10



MILES



## COUNTIES AND MUNICIPALITIES

hatching eggs is of great significance to the poultry industry.

| <b>TOTAL FARM INCOME FROM CROPS AND LIVESTOCK</b> |         |                     |
|---|---------|---------------------|
| <b>Field Crops</b>                                |         |                     |
|   | Acreage | Value               |
| Commercial Corn                                   | 169,300 | \$17,637,000        |
| Soybeans  | 84,800  | 7,246,600           |
| Wheat   | 76,400  | 5,924,500           |
| White Beans                                       | 24,000  | 2,557,200           |
| Oats  | 36,400  | 1,858,400           |
| Winter and Spring Barley                          | 6,000   | 325,000             |
| Kidney Beans                                      | 2,000   | 160,000             |
| <b>Total Value of Field Crops</b>                 |         | <b>\$35,708,700</b> |
| <b>Specialized Crops</b>                          |         |                     |
|   | Acreage | Value               |
| Burley Tobacco                                    | 1,552   | \$ 2,064,910        |
| Black Tobacco                                     | 550     | 300,000             |
| Flue Tobacco                                      | 1,000   | 1,000,000           |
| Tomatoes  | 6,187   | 3,500,000           |
| Canning Peas                                      | 3,238   | 535,000             |
| Potatoes  | 1,500   | 200,000             |
| Sweet Corn  | 2,427   | 400,000             |
| Cucumbers   | n.a.    | 50,000              |
| Lima Beans  | n.a.    | 111,500             |
| Onions  | 500     | 750,000             |
| Fruits  | 1,200   | 1,500,000           |
| Pedigreed Crops (incl.seed wheat, rye, barley)    | 26,000  | 2,500,000           |
| Fresh Vegetables                                  | n.a.    | 300,000             |
| Red Beets   | n.a.    | 231,500             |
| Cabbage   | n.a.    | 61,000              |
| Pumpkin and Squash                                | n.a.    | 48,000              |
| Carrots   | n.a.    | 65,000              |
| Green and Waxed Beans                             | n.a.    | 143,000             |
| Sugar Beets                                       | 12,412  | 3,350,000           |
| Seed Corn   | 5,600   | 500,000             |
| Miscellaneous Fresh Fruits and Vegetables         | n.a.    | 100,000             |
| <b>Total Value of Specialized Crops</b>           |         | <b>\$17,709,910</b> |
| <b>Livestock</b>                                  |         |                     |
|   | Number  | Value               |
| Hogs Marketed                                     | 170,500 | \$ 6,500,000        |
| Cattle Marketed                                   | 52,500  | 10,500,000          |
| Calves Marketed                                   | 3,000   | 300,000             |
| Sheep and Lambs Marketed                          | 3,000   | 60,000              |
| Poultry Production                                | n.a.    | 3,000,000           |
| Dairy Production                                  | n.a.    | 1,500,000           |
| <b>Total Value of Livestock</b>                   |         | <b>\$21,860,000</b> |
| <b>Total Farm Income from Crops + Livestock</b>   |         | <b>\$75,278,610</b> |

### Industrial Development

In 1962, there were 189 manufacturing establishments in the County, with 7,000 employees and a total of \$162.5 million in terms of factory ship-

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

ments.

The major centres of Kent's manufacturing activity are Chatham and Wallaceburg. In 1962, the selling value of factory shipments was \$108 million in Chatham and the wages and salaries of the 3,400 employees amounted to \$15.7 million. In the same year the manufacturing establishments of Wallaceburg employed 1,933 persons, with a total payroll of \$7.8 million, and factory shipments valued at \$26.7 million. These two centres combined accounted for 83 per cent of the value of the manufacturing production in the County.

The food and beverages industries form a major group in Kent. In 1961, the County had 59 establishments manufacturing or processing food and beverages. One of the major companies in this field is the Campbell Soup Company Ltd., Chatham, which, besides soup also produces vegetable juice. Libby, McNeill and Libby of Canada Limited manufacture canned and bottled food products. The Company's main plant is in Chatham, with a branch plant in Wallaceburg. The Canada and Dominion Sugar Company Limited is also located in Chatham. In 1961, Kent County accounted for 11 dairy factories, 2 slaughtering and meat processors and 2 poultry processors.

One of the County's major employers is the International Harvester Company of Canada Limited, Chatham, which produces motor trucks. In the field of primary metal industries, Wallaceburg is the home of the Wallaceburg Brass Limited which employs some 300 people. Major products are plumbing brass, die casting, aluminum, brass and steel casting.

Another manufacturing group of the County is engaged in the production of non-metallic mineral products. The Dominion Glass Company Limited in Wallaceburg, producing all types of processed and blown glass, is the town's largest employer.

### **Natural Gas**

Substantial supplies of natural gas are obtained annually from local gas wells operated by the Union Gas Co. and other companies. In 1965 there were 290 producing wells in the County whose combined output accounted for 35 per cent of total regional production.

### **Transportation**

Kent County is served by five railways and all major highways in South-western Ontario, while air service connections are also available.

### **City of Chatham**

In the early 19th century, Chatham, at the head of Thames navigation, became Kent's leading community and County town, and built sailing crafts and steam boats, till in 1854, the Great Western Railway provided more efficient methods of transportation. Although the railroad captured from river and lake craft the profitable immigrant trade, Chatham continued to build steam boats and schooners in the early 1880's. About this time D. R. Van Allen, intrigued by the prospective opening of the West,





—Courtesy—Ontario Department of Tourism and Information.

**The Chatham-Kent Museum, Chatham.**

converted his shipbuilding enterprise to wagon-making. The wagon works of the Chatham Manufacturing Company became for years Chatham's largest industry, to be eventually taken over and expanded by International Harvester Company of Canada Limited.

At present, Chatham, with a population of over 30,000 and with about 70 industrial establishments is a vigorously growing centre of the County. The Canada and Dominion Sugar Company Limited, the largest beet sugar refinery in the Commonwealth, Campbell Soup Company Ltd., Libby, McNeill and Libby of Canada Limited, International Harvester Company and British Leaf Tobacco Co. of Canada, Limited are only a few examples of the thriving industrial activity of Chatham.

**Wallaceburg** (population over 10,000) is Kent's largest town. It has a diversified industry, and the locally manufactured products include glass, brass, die casting, canned vegetables and many other items.

**Ridgetown** (population 2,700) is an important shipping centre for agricultural produce, and it is the home of the Western Ontario Agricultural School.

#### **LAMBTON COUNTY**

The borders of Lambton County—formed on the north by Lake Huron, on the east by Middlesex County, on the south by Kent County and to the west by the St. Clair River—encompass an area of 1,124 square miles and a population which is estimated to have totalled slightly less than 103,000 in 1966. Thus, Lambton accounts for 40.9 per cent of the Region's land

## **LAKE ST. CLAIR REGION ECONOMIC SURVEY**

area and approximately one-fifth of its inhabitants. Estimates prepared by the Department of Economics and Development indicate that by 1986 the County's population will lie between 238,200 and 250,200.

Virtually all of Lambton County is drained through the agency of rivers flowing into either Lake St. Clair or the St. Clair River, the only exception being a small strip of land north-east of Sarnia, for which Lake Huron serves as the drainage medium. From the physiographic standpoint, the County's dominant feature is the Lambton Clay Plain. Although well-drained, this land form has remained somewhat underdeveloped agriculturally. Consequently, woodlots and pasture farms are more frequently encountered there than in other parts of the Region. The Wyoming Moraine—a long, dagger-shaped formation which extends almost into the very heart of the County—and the Seaforth Moraine—a narrow, finger-like formation lying south-east of the above land form—are two other salient features of Lambton's physical geography.

The Stratford Till Plain is situated between these moraines, while the Ekfrid Clay Plain, the Bothwell Sand Plain and the Chatham Flats extend for short distances across the County's eastern, southeastern and southwestern borders. The Huron Fringe—the distinguishing feature of which is its abundance of fine, sandy beaches extends, as its name indicates, along the shore of Lake Huron.

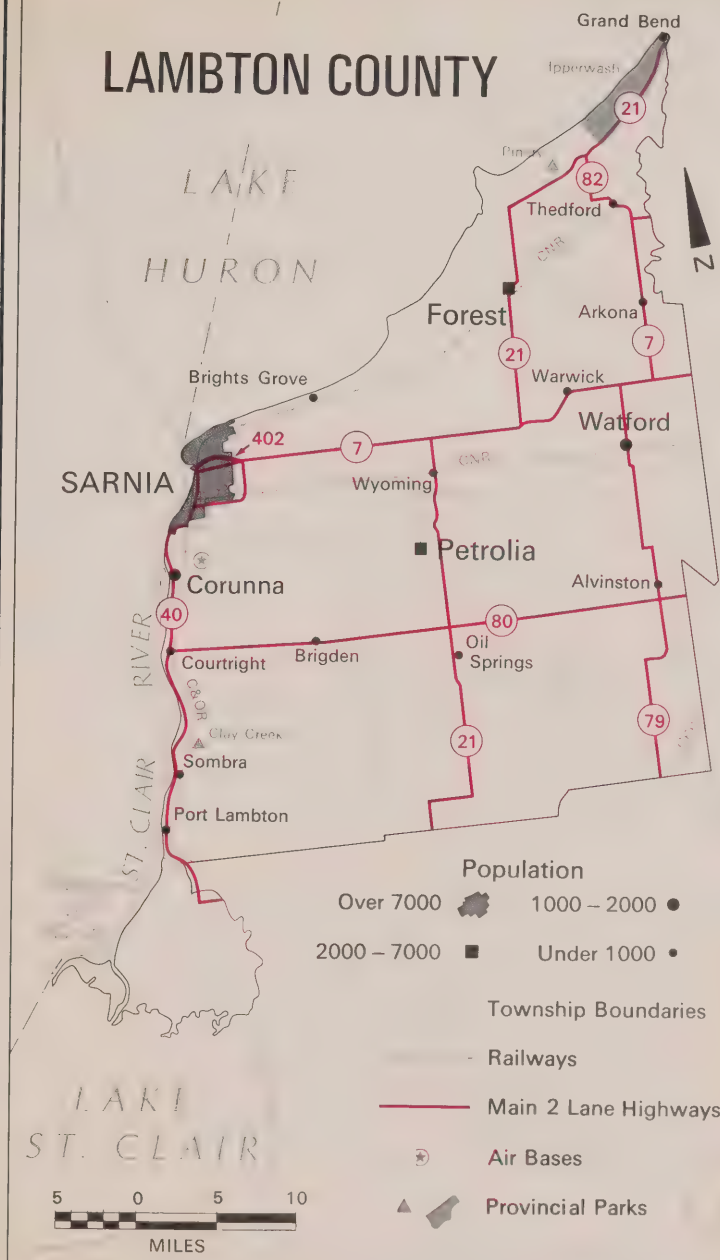
### **Historical Background**

The history of settlement in the County dates from the early years of the nineteenth century, at which time Lambton, in common with the other Counties in the Region, was part of an administrative division known as the Western District. Settlers did not begin to arrive in significant numbers, however, until after the conclusion of a treaty with the Chippewa Indians in 1827, since in the absence of such a treaty it had been impossible to survey the land properly. The abolition of the Western District in 1849 made possible and coincided with Lambton's emergence as a separate entity. Seven years later, Port Sarnia, a settlement which had been founded some twenty years earlier and which was then the only community of a significant size in the County, achieved town status. A city since 1914, Sarnia now has almost 53,000 inhabitants and ranks as the second most populous urban centre in the Region—a position which it enjoys by reason of its ability to attract increasing numbers of petrochemical establishments.

### **Primary Industries**

Among the County's primary industries, agriculture is the one to which the most importance is attached. The importance of agriculture in the County's economy is illustrated by the fact that in 1961, 83.5 per cent of Lambton's 1,124 square miles were classified as farm land with a total agricultural output of \$22.2 million. Livestock and livestock products accounted for 76.4 per cent of this total, while field crops were responsible for an additional 18.9 per cent.

# LAMBTON COUNTY



SARNIA

ST. CLAIR RIVER

LAKE ST. CLAIR

Grand Bend

Upperwash

Pink

Thedford

Forest

Arkona

Warwick

Watford

Brights Grove

Wyoming

Petrolia

Alvinston

Corunna

Courtright

Brigden

Oil Springs

Sombra

Port Lambton

## Population

Over 7000

1000 - 2000

2000 - 7000

Under 1000

## Township Boundaries

Railways

Air Bases

Provincial Parks



MILES





## COUNTIES AND MUNICIPALITIES

Further examination of the data pertaining to agriculture reveals that in 1961 the County's farm acreage comprised 123,780 acres of unimproved land, 311,867 acres of land under crops and 27,159 acres of land devoted to other agricultural purposes. It should also be noted that in 1961, 75.5 per cent of the County's 4,206 farms were in the commercial category while the remainder was classified as either small scale or residential.

The primary sector of the County economy also embraces the oil and natural gas industries, both of which have been contributing to Lambton's development for roughly one hundred years. In 1964 the value of their respective outputs amounted to \$1.5 million and \$2.9 million.

### **Manufacturing**

In 1962 Lambton was the site of 126 manufacturing establishments with a combined output of \$478.5 million in terms of factory shipments, representing an increase of 129.3 per cent over 1951 and equivalent to 38.0 per cent of the corresponding total for the entire Region.

The largest contributions to the value of the County's manufacturing output are made by the Petroleum Refining and Industrial Chemical industries. In 1962, for example, when the former industry comprised seven establishments and the latter three, they collectively accounted for 89.9 per cent of the aggregate selling value of the County's factory shipments, their respective output being valued at \$253.5 million and \$176.6 million.

### **Transportation**

Well-served by railways, maritime carriers, airlines, trucking companies, highways and pipelines, Lambton County is covered by all transportation media. Its rail connections consist almost exclusively of track maintained by the Canadian National Railways and the Chesapeake and Ohio Railway. The transfer of goods by water is made possible by the presence within the County of two shipping ports—Sarnia and Courtright. These ports handle a large volume of traffic which in 1964 reached 3.8 million tons of cargo.

The availability of air transport services in the County is facilitated by the presence near Sarnia of a two-runway aerodrome at which both scheduled passenger flights to Toronto and a charter cargo service are obtainable. The 74 trucking companies which operate in the County serve a total of 15 communities. Lambton's road network, of which organized township roads account for the major portion, covers some 2,000 miles. With respect to pipelines, the County's facilities consist of portions of the Union Gas distribution and transmission system, a segment of the Inter-provincial Pipeline—a line which carries crude oil from Western Canada to the Toronto area via the United States—and sections of two products pipelines, operated by Imperial Oil Limited and the Sun Oil Company Limited.

### **Labour Force and Trade**

In 1961, Lambton's labour force totalled 36,608, as compared with the



## LAKE ST. CLAIR REGION ECONOMIC SURVEY

regional aggregate of 161,005, and was 75.2 per cent male. When the County figure is analysed from the industry division standpoint, one finds that almost three-quarters of these individuals may be categorized as members of the Manufacturing (28.6 per cent), Community, Business and Personal Service (17.5 per cent), Agriculture (14.1 per cent) and Trade (13.1 per cent) divisions. From the occupational standpoint the most important components of the County labour force were the Craftsmen, Production Process and Related Workers (25.8 per cent), Farmers and Farm Workers (14.1 per cent), Service and Recreation Occupations (12.4 per cent), Professional and Technical (11.5 per cent) and Clerical (9.7 per cent) groups.

The receipts of the County's retail trade, wholesale trade and services locations aggregated \$88.9 million, \$56.8 million and \$13.4 million, respectively, in 1961. Their payroll totals, in the above order, were \$8.0 million, \$2.9 million and \$3.0 million.

### **Housing Facilities**

In 1961 there were 27,535 occupied dwellings in the County. Eighty-five per cent of these were single detached units, while flats and apartments accounted for virtually all of the remainder. Examination of the conditions of tenure reveals a similar degree of uniformity, since 78.9 per cent of these dwellings were owner-occupied. As regards their physical condition, 72.6 per cent were in a good state of repair, while those requiring either minor or major repairs accounted for 22.4 per cent and 5.0 per cent, respectively. It should further be noted that the overwhelming majority of these dwellings were equipped with all modern conveniences. This is well illustrated by the fact that 93.4 per cent of all dwellings had running water, 98.0 per cent had refrigeration facilities and that 88.8 per cent had at least one television set. The proportion of homes with automobiles amounted to 83.9 per cent.

**Sarnia**, with an estimated population of 52,300 in 1965, is currently Lambton's only city and the home of approximately one-half of its inhabitants. Largely because of its proximity to several of North America's largest industrial centres, its excellent transportation facilities and its possession of virtually unlimited supplies of water, Sarnia has enjoyed a high level of prosperity in recent years. This is reflected in the fact that its present population represents an increase of approximately 50 per cent over 1951.

Over the period 1951-61 the value of the manufacturing shipments originating in Sarnia rose from \$194.3 million to \$352.2 million, although the number of establishments increased by only one during the same period. Thus, in 1961 the City's 53 manufacturing establishments were responsible for 78.6 per cent and 30.1 per cent, respectively, of the total value of the shipments made by their counterparts in the County and the Region.

Sarnia's economic prosperity depends to a large extent upon the



**City Hall, Sarnia.**

*—Courtesy—Ontario Department of Tourism and Information.*

state of the petrochemical industry as the City's three largest employers are Polymer Corporation Limited (3,000 employees), Imperial Oil Limited (2,000 employees) and Dow Chemical of Canada (1,000 employees). The first of these concerns produces more than 40 different types and grades of rubber, while the second uses Canada's largest oil refinery to manufacture products such as gasoline, furnace fuel, petrochemical feed, bunker fuel and asphalt. In addition, Imperial manufactures industrial solvents and the basic chemicals used in the production of plastics, detergents, rubber, fibres and numerous other synthetics through the agency of a petrochemical plant located on a site adjacent to the refinery. The facilities of the third company—Dow Chemical of Canada Limited—are being utilized for the production of a wide range of chemicals and plastics such as chlorine, caustic soda, glycol, vinyl chloride, chlorinated solvents, hydrochloric acid, polyethylene and styrene.

Among the other petrochemical firms in the City are Cabot Carbon of Canada Limited and the Sun Oil Company Limited. The former employs some 140 people in the production of carbon black, while the latter has a staff complement of about 80 and is concerned with the manufacture of products such as motor gasoline, kerosene, stove oil, light and heavy fuel oil, petrochemical feed and butylenes.

The list of large-scale manufacturing operations presently located in Sarnia includes Fiberglas Canada Limited, Mueller Canada Limited and Coposite Insulations Limited. The first of these produces insulation

## LAKE ST. CLAIR REGION ECONOMIC SURVEY

products, the second refrigeration and brass plumbing fittings and the third asbestos pipe covering. They have employment totals of 460, 338 and 25, respectively.

There were 475 retail sales outlets, 58 wholesale trade locations and 211 services industry locations in Sarnia in 1961. Their receipts aggregated \$64.5 million, \$25.4 million and \$7.8 million, respectively, while their payroll totals amounted to \$6.6 million, \$1.6 million and \$2.0 million.

Two newspapers—a daily and a weekly—and a radio station provide the City with a full range of communications media. It should be noted, however, that Sarnians are also able to avail themselves of the services offered by the radio stations, television stations and newspapers located in such nearby centres as London, Windsor and Detroit.

Sarnia is endowed with excellent transportation facilities and is served by King's Highways Nos. 7, 40 and 407, the Chesapeake and Ohio and Canadian National Railways, a seaway depth harbour and is situated in close proximity to a two-runway aerodrome. In addition, the City is a major discharge centre for the Interprovincial Pipeline, which carries crude oil from Western Canada, and serves as the Western terminus of two petroleum products pipelines.

## CONCLUSION

This survey identifies and analyzes in depth the major economic, geographic and cultural aspects of the Lake St. Clair Economic Region. Located in the southernmost part of Ontario, the Region's socio-economic framework is characterized by a well-balanced economy which experienced considerable growth accompanied by steadily rising standards of living.

The Region's favourable location relative to major market areas in Ontario and the United States was instrumental in the development of a broad complex of secondary manufacturing facilities. Situated at the crossroads of an extensive network of rail, road and water transportation routes in close proximity to the United States, the Lake St. Clair Region has ready access to raw material sources, major distribution centres as well as to technical skills.

Dominated by the automotive and petrochemical industries, secondary manufacturing employs about one-third of the Region's labour force. As a result of the Automotive Free Trade Agreement with the United States, plans for expansion in the transportation and related industries are in progress while sizable capital investments are anticipated for the future. Continued growth in the petrochemical industry and food processing along with favourable developments in the automotive sector are expected to sustain a steady long-term growth of the Region's industrial output. Recent trends in the Region indicate that manufacturing output will range between 10.0 per cent and 10.8 per cent of Ontario's total output with a production volume of \$2.8 to \$3.0 billion (constant 1956 dollars). Assuming an average of \$2.9 billion (constant 1956 dollars) in 1976, total manufacturing output will grow at an annual rate of some 6 per cent over the 1962-1976 period.

Enjoying the mildest climate and one of the longest growing seasons in Ontario, agriculture occupies an important position in the Region's economy, providing employment for some 12 per cent of the regional labour force. A wide variety of crops are cultivated, including corn for husking, soybeans, winter wheat, tomatoes and vegetables for canning

## **LAKE ST. CLAIR REGION ECONOMIC SURVEY**

while livestock production has gradually shifted from dairy cattle to beef cattle over the last fifteen years. Extensive use of agricultural machinery in many phases of farm operations has been increasing rapidly with the result that farms in the Region are now the most intensively mechanized in Ontario. Future developments in farming will depend not only on trends within the framework of the area's agriculture but also — and perhaps to an even greater extent — on the direction of growth in other sectors of the Region's economy. Among the external influences likely to affect agriculture, urban growth is expected to be a major factor. The growth of urban centres, the need to build highways and roads and the necessity to provide land for recreational uses will place additional demands on the rural areas in the Region. In recognition of the prominent place occupied by the area's agriculture, the loss of prime farm lands will undoubtedly be minimized by sound land-use planning and judicious zoning policies.

Although manufacturing and agriculture form the primary basis of the Region's economy, the tourist trade and associated service industries have become an important source of regional income over the last decade. Favourable climatic conditions, the abundance of parks and sandy beaches, and a wide variety of scenic and historical features have attracted a growing number of tourists resulting in accelerated development of recreational facilities and hotel or motel accommodation.

While the Region's economy is likely to be subject to short-run fluctuations, present indications suggest continued and sustained long-term growth accompanied by accelerated expansion and diversification of manufacturing output and steadily rising agricultural productivity.



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|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|-------------|
|   | 1901           | 1911           | 1921           | 1931           | 1941           | 1951           | 1956           | 1961           | 1961/1901    | 1961/1951   |
|   |                |                |                |                |                |                |                |                |              | % Change    |
| <b>A-Border</b>   |                |                |                |                |                |                |                |                |              |             |
| Essex.....  | 58,744         | 67,547         | 102,575        | 159,780        | 174,230        | 217,150        | 246,901        | 258,218        | 339.6        | 18.9        |
| Kent.....   | 57,194         | 55,995         | 57,949         | 62,865         | 66,346         | 79,128         | 85,362         | 89,427         | 56.4         | 13.0        |
| Sub-total.....  | 115,938        | 123,542        | 160,524        | 222,645        | 240,576        | 296,278        | 332,263        | 347,645        | 199.9        | 17.3        |
| <b>B-Lambton</b>  |                |                |                |                |                |                |                |                |              |             |
| Lambton.....  | 56,642         | 51,332         | 52,879         | 54,674         | 56,925         | 74,960         | 89,939         | 102,131        | 80.3         | 36.2        |
| <b>Total, Region....</b>  | <b>172,580</b> | <b>174,874</b> | <b>213,403</b> | <b>277,319</b> | <b>297,501</b> | <b>371,238</b> | <b>422,202</b> | <b>449,776</b> | <b>160.6</b> | <b>21.2</b> |
| Total, Ontario.....   | 2,182,947      | 2,527,292      | 2,933,662      | 3,431,683      | 3,787,655      | 4,597,542      | 5,404,933      | 6,236,092      | 185.7        | 35.6        |
| Region as   |                |                |                |                |                |                |                |                |              |             |
| % of Ontario....  | 7.9            | 6.9            | 7.3            | 8.1            | 7.9            | 8.1            | 7.8            | 7.2            |              | 15.4        |



# POPULATION, VITAL STATISTICS AND IMMIGRATION

## FACTORS IN THE GROWTH OF POPULATION, COUNTIES, LAKE ST. CLAIR REGION, 1951 TO 1961 AND 1956 TO 1961

|                      | Population<br>1951 | Actual<br>Increase<br>-----<br>1951-1961 | Natural<br>Increase<br>-----<br>1951-1961 | Net<br>Migration<br>-----<br>1951-1961 | Actual<br>Increase<br>-----<br>--% 1951 | Natural<br>Increase<br>-----<br>Population-- | Net Mi-<br>gration |
|----------------------|--------------------|--|---|--|---|--|--------------------|
| <b>A—Border</b>      |                    |  |   |  |   |  |                    |
| Essex . . . . .      | 217,150            | 41,068                                   | 44,350                                    | -3,282                                 | 18.9                                    | 20.4   | -1.5               |
| Kent . . . . .       | 79,128             | 10,299                                   | 14,885                                    | -4,586                                 | 13.0                                    | 18.8   | -5.8               |
| Sub-total . .        | 296,278            | 51,367                                   | 59,235                                    | -7,868                                 | 17.3                                    | 20.0   | -2.7               |
| <b>B—Lambton</b>     |                    |  |   |  |   |  |                    |
| Lambton . .          | 74,960             | 27,171                                   | 17,567                                    | 9,604                                  | 36.2                                    | 23.4   | 12.8               |
| <b>Total, Region</b> | <b>371,238</b>     | <b>78,538</b>                            | <b>76,802</b>                             | <b>1,736</b>                           | <b>21.2</b>                             | <b>20.7</b>                                  | <b>0.5</b>         |

## POPULATION OF INCORPORATED CITIES, TOWNS AND VILLAGES OF 5,000 AND OVER IN 1961, 1901-1961

|                     | 1901   | 1911   | 1921   | 1931   | 1941    | 1951    | 1956    | 1961    |
|---------------------|--------|--------|--------|--------|---------|---------|---------|---------|
| Chatham . . . . .   | 9,068  | 10,770 | 13,256 | 14,569 | 17,369  | 21,218  | 22,262  | 29,826  |
| Leamington . . .    | 2,451  | 2,652  | 3,675  | 4,902  | 5,858   | 6,950   | 7,856   | 9,030   |
| Riverside . . . . . | —      | —      | 1,155  | 4,432  | 4,878   | 9,214   | 13,335  | 18,089  |
| Sarnia . . . . .    | 8,176  | 9,947  | 14,877 | 18,191 | 18,734  | 34,697  | 43,447  | 50,976  |
| Wallaceburg . .     | 2,763  | 3,438  | 4,006  | 4,326  | 4,986   | 7,688   | 7,892   | 7,881   |
| Windsor . . . . .   | 12,153 | 17,829 | 38,591 | 63,108 | 105,311 | 120,049 | 121,980 | 114,367 |

# POPULATION, VITAL STATISTICS AND IMMIGRATION

| Population |         | Actual<br>Increase | Natural<br>Increase | Net<br>Migration | Actual<br>Increase      | Natural<br>Increase | Net Mi-<br>gration |
|------------|---------|--------------------|---------------------|------------------|-------------------------|---------------------|--------------------|
| 1956       | 1961    | -----              | 1956-1961           | -----            | ---% 1956 Population--- |                     |                    |
| 246,901    | 258,218 | 11,317             | 22,491              | -11,174          | 4.6                     | 9.1                 | -4.5               |
| 85,362     | 89,427  | 4,065              | 7,491               | -3,426           | 4.8                     | 8.8                 | -4.0               |
| 332,263    | 347,645 | 15,382             | 29,982              | -14,600          | 4.6                     | 9.0                 | -4.4               |
| 89,939     | 102,131 | 12,192             | 9,399               | 2,793            | 13.6                    | 10.5                | 3.1                |
| 422,202    | 449,776 | 27,574             | 39,381              | -11,807          | 6.5                     | 9.3                 | -2.8               |

## POPULATION OF INCORPORATED CITIES, TOWNS AND VILLAGES, LAKE ST. CLAIR REGION, CENSUS YEARS 1951, 1956 AND 1961

|                  |         |         |         | % Change  |           |
|------------------|---------|---------|---------|-----------|-----------|
|                  |         |         |         | 1961 / 51 | 1961 / 56 |
| <b>A-Border</b>  |         |         |         |           |           |
| <b>Essex</b>     |         |         |         |           |           |
| <b>Cities</b>    |         |         |         |           |           |
| Windsor.....     | 120,049 | 121,980 | 114,367 | -4.7      | -6.2      |
| <b>Towns</b>     |         |         |         |           |           |
| Amherstburg...   | 3,638   | 4,099   | 4,452   | 22.4      | 8.6       |
| Essex.....       | 2,741   | 3,348   | 3,428   | 25.1      | 2.4       |
| Harrow.....      | 1,519   | 1,851   | 1,787   | 17.6      | -3.5      |
| Kingsville.....  | 2,631   | 2,884   | 3,041   | 15.6      | 5.4       |
| Leamington....   | 6,950   | 7,856   | 9,030   | 29.9      | 14.9      |
| Ojibway.....     | 21      | —       | 6       | -71.4     | —         |
| Riverside.....   | 9,214   | 13,335  | 18,089  | 96.3      | 35.7      |
| Tecumseh.....    | 3,543   | 4,209   | 4,476   | 26.3      | 6.3       |
| <b>Villages</b>  |         |         |         |           |           |
| Belle River..... | 1,431   | 1,814   | 1,854   | 29.6      | 2.2       |
| St. Clair Beach. | 474     | 834     | 1,460   | 208.0     | 75.1      |

(cont'd next page)

# POPULATION, VITAL STATISTICS AND IMMIGRATION

## POPULATION OF INCORPORATED CITIES, TOWNS AND VILLAGES, LAKE ST. CLAIR REGION, CENSUS YEARS 1951, 1956 AND 1961 (CONT'D)

|                        | 1951   | 1956   | 1961   | % Change |          |
|------------------------|--------|--------|--------|----------|----------|
|                        |        |        |        | 1961 /51 | 1961 /56 |
| <b>Kent</b>            |        |        |        |          |          |
| <b>Cities</b>          |        |        |        |          |          |
| Chatham . . . . .      | 21,218 | 22,262 | 29,826 | 40.6     | 34.0     |
| <b>Towns</b>           |        |        |        |          |          |
| Blenheim . . . . .     | 2,459  | 2,844  | 3,151  | 28.1     | 10.8     |
| Bothwell . . . . .     | 725    | 765    | 819    | 13.0     | 7.1      |
| Dresden . . . . .      | 2,052  | 2,260  | 2,346  | 14.3     | 3.8      |
| Ridgetown . . . . .    | 2,365  | 2,483  | 2,603  | 10.1     | 4.8      |
| Tilbury . . . . .      | 2,682  | 3,138  | 3,030  | 13.0     | -3.4     |
| Wallaceburg . . . . .  | 7,688  | 7,892  | 7,881  | 2.5      | -0.1     |
| <b>Villages</b>        |        |        |        |          |          |
| Erieau . . . . .       | 434    | 475    | 497    | 14.5     | 4.6      |
| Erie Beach . . . . .   | 59     | 95     | 137    | 132.2    | 44.2     |
| Highgate . . . . .     | 349    | 378    | 374    | 7.2      | -1.1     |
| Thamesville . . . . .  | 968    | 1,074  | 1,054  | 8.9      | -1.9     |
| Wheatley . . . . .     | 1,021  | 1,196  | 1,362  | 33.4     | 13.9     |
| <b>B-Lambton</b>       |        |        |        |          |          |
| <b>Lambton</b>         |        |        |        |          |          |
| <b>Cities</b>          |        |        |        |          |          |
| Sarnia . . . . .       | 34,697 | 43,447 | 50,976 | 46.9     | 17.3     |
| <b>Towns</b>           |        |        |        |          |          |
| Forest . . . . .       | 1,790  | 2,035  | 2,188  | 22.2     | 7.5      |
| Petrolia . . . . .     | 3,105  | 3,426  | 3,708  | 19.4     | 8.2      |
| <b>Villages</b>        |        |        |        |          |          |
| Alvinston . . . . .    | 693    | 652    | 660    | -4.8     | 1.2      |
| Arkona . . . . .       | 370    | 447    | 504    | 36.2     | 12.8     |
| Courtright . . . . .   | 531    | 581    | 532    | 0.2      | -8.4     |
| Grand Bend . . . . .   | —      | 953    | 928    | —        | -2.6     |
| Oil Springs . . . . .  | 433    | 481    | 484    | 11.8     | 0.6      |
| Point Edward . . . . . | 1,838  | 2,558  | 2,744  | 49.3     | 7.3      |
| Thedford . . . . .     | 616    | 717    | 759    | 23.2     | 5.9      |
| Watford . . . . .      | 1,201  | 1,217  | 1,293  | 7.7      | 6.2      |
| Wyoming . . . . .      | 694    | 792    | 880    | 26.8     | 11.1     |

**POPULATION, VITAL STATISTICS AND IMMIGRATION**

**POPULATION OF WINDSOR METROPOLITAN AREA,  
SARNIA URBAN AREA AND COMPONENT PARTS,  
LAKE ST. CLAIR REGION, 1951, 1956 AND 1961**

|  | 1961    | 1956    | 1951    |
|--|---------|---------|---------|
| <b>Windsor Metropolitan Area</b> . . . . . | 193,365 | 185,865 | 163,618 |
| Windsor City . . . . .                     | 114,367 | 121,980 | 120,049 |
| Ojibway . . . . .                          | 6       | —       | 21      |
| Riverside . . . . .                        | 18,089  | 13,335  | 9,214   |
| St. Clair Beach . . . . .                  | 1,460   | 834     | 474     |
| Sandwich East . . . . .                    | 21,819  | 19,868  | 14,966  |
| Sandwich South . . . . .                   | 4,535   | 3,724   | 3,091   |
| Sandwich West . . . . .                    | 28,613  | 21,915  | 12,260  |
| Tecumseh . . . . .                         | 4,476   | 4,209   | 3,543   |
| <b>Sarnia Urban Area</b> . . . . .         | 61,293  | 51,473  | 40,366  |
| Sarnia City . . . . .                      | 50,976  | 43,447  | 34,697  |
| Moore . . . . .                            | 2,191   | 1,717   | 1,072   |
| Point Edward . . . . .                     | 2,744   | 2,558   | 1,838   |
| Sarnia Twp. . . . .                        | 5,001   | 3,402   | 2,404   |
| Indian Reserves . . . . .                  | 381     | 349     | 355     |

# POPULATION, VITAL STATISTICS AND IMMIGRATION

| RURAL-URBAN DISTRIBUTION OF POPULATION <sup>(1)</sup> ,<br>COUNTIES, LAKE ST. CLAIR REGION, JUNE 1, 1951, 1956, AND 1961 |      |                     |           |           |       |       |                          |       |                        |       |
|--|------|---------------------|-----------|-----------|-------|-------|--------------------------|-------|------------------------|-------|
|  | Year | Total<br>Population | Rural     |           | Urban |       | Per Cent<br>Distribution |       | % Change<br>1961 /1951 |       |
|  |      |                     | Rural     | Urban     | Rural | Urban | Rural                    | Urban | Rural                  | Urban |
| <b>A-Border</b>  |      |                     |           |           |       |       |                          |       |                        |       |
| Essex.....   | 1951 | 217,150             | 33,366    | 183,784   | 15.4  | 84.6  | +15.5                    | +19.5 |                        |       |
|  | 1956 | 246,901             | 37,703    | 209,198   | 15.3  | 84.7  |                          |       |                        |       |
|  | 1961 | 258,218             | 38,542    | 219,676   | 14.9  | 85.1  |                          |       |                        |       |
| Kent.....  | 1951 | 79,128              | 40,899    | 38,229    | 51.7  | 48.3  | -5.6                     | +32.9 |                        |       |
|  | 1956 | 85,362              | 43,694    | 41,668    | 51.2  | 48.8  |                          |       |                        |       |
|  | 1961 | 89,427              | 38,611    | 50,816    | 43.2  | 56.8  |                          |       |                        |       |
| Sub-total.....   | 1951 | 296,278             | 74,265    | 222,013   | 25.1  | 74.9  | +3.9                     | +21.8 |                        |       |
|  | 1956 | 332,263             | 81,397    | 250,866   | 24.5  | 75.5  |                          |       |                        |       |
|  | 1961 | 347,645             | 77,153    | 270,492   | 22.2  | 77.8  |                          |       |                        |       |
| <b>B-Lambton</b>   |      |                     |           |           |       |       |                          |       |                        |       |
| Lambton.....   | 1951 | 74,960              | 27,561    | 47,399    | 36.8  | 63.2  | +22.1                    | +44.5 |                        |       |
|  | 1956 | 89,939              | 30,405    | 59,534    | 33.8  | 66.2  |                          |       |                        |       |
|  | 1961 | 102,131             | 33,649    | 68,482    | 32.9  | 67.1  |                          |       |                        |       |
| Total, Region.....   | 1951 | 371,238             | 101,826   | 269,412   | 27.4  | 72.6  | +8.8                     | +25.8 |                        |       |
|  | 1956 | 422,202             | 111,802   | 310,400   | 26.5  | 73.5  |                          |       |                        |       |
|  | 1961 | 449,776             | 110,802   | 338,974   | 24.6  | 75.4  |                          |       |                        |       |
| Total, Ontario.....  | 1951 | 4,597,542           | 1,221,717 | 3,375,825 | 26.6  | 73.4  | +6.0                     | +46.4 |                        |       |
|  | 1956 | 5,404,933           | 1,302,014 | 4,102,919 | 24.1  | 75.9  |                          |       |                        |       |
|  | 1961 | 6,236,092           | 1,294,864 | 4,941,228 | 20.8  | 79.2  |                          |       |                        |       |

(1) 1956 Definitions. To facilitate historical comparison the 1956 Census definitions of rural and urban were used. Note: The definition of rural and urban for the 1961 Census was substantially the same as that used in 1956. Briefly, the 1961 definition specified that all cities, towns and villages of 1,000 and over, whether incorporated or not, were classed as urban, as well as the urbanized fringes of (a) cities classed as metropolitan areas, (b) those classed as other major urban areas, and (c) certain smaller cities, if the city together with its urbanized fringe was 10,000 population or over. The remainder of the population was classed as rural. The main differences from 1956 result from the exclusion of any non-urbanized fringes within metropolitan areas, and the inclusion of urbanized fringes adjoining those smaller cities covered in (c) above. The classification "rural farm" comprises all persons living in dwellings situated on farms in rural localities. A farm for 1961 is defined as a holding of one or more acres with sales of agricultural products of \$50 or more. This differs from 1956 when a farm was defined as a holding of: (1) three acres or more in size, or (2) from one to three acres with agricultural production in 1955 valued at \$250 or more. A sizeable part of the decrease shown for the rural population in 1961 is due to this change in farm definition.



**DETAILED RURAL-URBAN DISTRIBUTION OF POPULATION <sup>(1)</sup>,  
COUNTIES, LAKE ST. CLAIR REGION, JUNE 1, 1961**

|                   | Total<br>Population | Rural   |                     |          | Urban   |                     |                     |                     |                   |                   |                   |
|-------------------|---------------------|---------|---------------------|----------|---------|---------------------|---------------------|---------------------|-------------------|-------------------|-------------------|
|                   |                     | Total   | Farm <sup>(2)</sup> | Non-farm | Total   | 100,000<br>and over | 30,000 to<br>99,999 | 10,000 to<br>29,999 | 5,000 to<br>9,999 | 2,500 to<br>4,999 | 1,000 to<br>2,499 |
| <b>A-Border</b>   |                     |         |                     |          |         |                     |                     |                     |                   |                   |                   |
| Essex.....        | 258,218             | 48,048  | 18,795              | 29,253   | 210,170 | 183,859             | —                   | —                   | 9,030             | 12,365            | 4,916             |
| Kent.....         | 89,427              | 38,611  | 18,260              | 20,351   | 50,816  | —                   | —                   | 29,826              | 7,881             | 7,340             | 5,769             |
| Sub-total.....    | 347,645             | 86,659  | 37,055              | 49,604   | 260,986 | 183,859             | —                   | 29,826              | 16,911            | 19,705            | 10,685            |
| <b>B-Lambton</b>  |                     |         |                     |          |         |                     |                     |                     |                   |                   |                   |
| Lambton.....      | 102,131             | 33,649  | 16,738              | 16,911   | 68,482  | —                   | 61,293              | —                   | —                 | 3,708             | 3,481             |
| Total, Region.... | 449,776             | 120,308 | 53,793              | 66,515   | 329,468 | 183,859             | 61,293              | 29,826              | 16,911            | 23,413            | 14,166            |

(1) 1961 Definition.

(2) For change in farm population, see Note following table on "Rural-Urban Distribution of Population, Counties and Districts, Lake St. Clair Region, 1951, 1956 and 1961".

**POPULATION BY SEX, COUNTIES,  
LAKE ST. CLAIR REGION, JUNE 1, 1951, 1956 AND 1961**

|                        | Total Population |                |                | Male           |             |                |             |                |             | Female         |             |                |             |                |             | Males to 100<br>Females |            |            |
|------------------------|------------------|----------------|----------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|-------------------------|------------|------------|
|                        | 1951             | 1956           | 1961           | No.            | %           | No.            | %           | No.            | %           | No.            | %           | No.            | %           | No.            | %           | 1951                    | 1956       | 1961       |
|                        |                  |                |                |                |             |                |             |                |             |                |             |                |             |                |             |                         |            |            |
| <b>A—Border</b>        |                  |                |                |                |             |                |             |                |             |                |             |                |             |                |             |                         |            |            |
| Essex.....             | 217,150          | 246,901        | 258,218        | 110,405        | 50.8        | 124,762        | 50.5        | 129,079        | 50.0        | 106,745        | 49.2        | 122,139        | 49.5        | 129,139        | 50.0        | 103                     | 102        | 100        |
| Kent.....              | 79,128           | 85,362         | 89,427         | 40,133         | 50.7        | 42,963         | 50.3        | 44,942         | 50.3        | 38,995         | 49.3        | 42,399         | 49.7        | 44,485         | 49.7        | 103                     | 101        | 101        |
| Sub-total.....         | 296,278          | 332,263        | 347,645        | 150,538        | 50.8        | 167,725        | 50.5        | 174,021        | 50.1        | 145,740        | 49.2        | 164,538        | 49.5        | 173,624        | 49.9        | 103                     | 102        | 100        |
| <b>B—Lambton</b>       |                  |                |                |                |             |                |             |                |             |                |             |                |             |                |             |                         |            |            |
| Lambton.....           | 74,960           | 89,939         | 102,131        | 38,261         | 51.0        | 45,442         | 50.5        | 51,845         | 50.8        | 36,699         | 49.0        | 44,497         | 49.5        | 50,286         | 49.2        | 104                     | 102        | 103        |
| <b>Total, Region..</b> | <b>371,238</b>   | <b>422,202</b> | <b>449,776</b> | <b>188,799</b> | <b>50.9</b> | <b>213,167</b> | <b>50.5</b> | <b>225,866</b> | <b>50.2</b> | <b>182,439</b> | <b>49.1</b> | <b>209,035</b> | <b>49.5</b> | <b>223,910</b> | <b>49.8</b> | <b>103</b>              | <b>102</b> | <b>101</b> |
| Total, Ontario...      | 4,597,542        | 5,404,933      | 6,236,092      | 2,314,170      | 50.3        | 2,721,519      | 50.4        | 3,134,528      | 50.3        | 2,283,372      | 49.7        | 2,683,414      | 49.6        | 3,101,564      | 49.7        | 101                     | 101        | 101        |

# POPULATION, VITAL STATISTICS AND IMMIGRATION

## POPULATION BY AGE GROUPS COUNTIES, LAKE ST. CLAIR REGION, JUNE 1, 1961

|                           |            | Total          | 0-4           | 5-9           | 10-14         | 15-19         |
|---------------------------|------------|----------------|---------------|---------------|---------------|---------------|
| <b>A-Border</b>           |            |                |               |               |               |               |
| Essex                     | No.        | 258,218        | 30,826        | 29,117        | 25,671        | 18,659        |
|                           | %          | (100.0)        | (11.9)        | (11.3)        | (9.9)         | (7.2)         |
| Kent.....                 | No.        | 89,427         | 10,769        | 10,007        | 8,947         | 7,018         |
|                           | %          | (100.0)        | (12.0)        | (11.2)        | (10.0)        | (7.9)         |
| Sub-total.....            | No.        | 347,645        | 41,595        | 39,124        | 34,618        | 25,677        |
|                           | %          | (100.0)        | (12.0)        | (11.2)        | (10.0)        | (7.4)         |
| <b>B-Lambton</b>          |            |                |               |               |               |               |
| Lambton.....              | No.        | 102,131        | 13,011        | 12,135        | 10,419        | 7,572         |
|                           | %          | (100.0)        | (12.7)        | (11.9)        | (10.2)        | (7.4)         |
| <b>Total, Region.....</b> | <b>No.</b> | <b>449,776</b> | <b>54,606</b> | <b>51,259</b> | <b>45,037</b> | <b>33,249</b> |
|                           | <b>%</b>   | <b>(100.0)</b> | <b>(12.1)</b> | <b>(11.4)</b> | <b>(10.0)</b> | <b>(7.4)</b>  |
| Total Ontario.....        | No.        | 6,236,092      | 740,193       | 674,519       | 593,037       | 436,883       |
|                           | %          | (100.0)        | (11.9)        | (10.8)        | (9.5)         | (7.0)         |

# POPULATION, VITAL STATISTICS AND IMMIGRATION

| 20-24                         | 25-34                          | 35-44                          | 45-54                          | 55-64                         | 65-69                         | 70 +                          | Median Age |
|-------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|-------------------------------|-------------------------------|------------|
| 14,494<br>(5.6)               | 32,944<br>(12.8)               | 34,406<br>(13.3)               | 26,770<br>(10.4)               | 23,213<br>(9.0)               | 8,766<br>(3.4)                | 13,352<br>(5.2)               | 28         |
| 5,404<br>(6.0)                | 10,862<br>(12.2)               | 11,179<br>(12.5)               | 9,494<br>(10.6)                | 7,548<br>(8.4)                | 2,931<br>(3.3)                | 5,268<br>(5.9)                | 27         |
| 19,898<br>(5.7)               | 43,806<br>(12.6)               | 45,585<br>(13.1)               | 36,264<br>(10.4)               | 30,761<br>(8.8)               | 11,697<br>(3.4)               | 18,620<br>(5.4)               | 28         |
| 6,164<br>(6.0)                | 13,662<br>(13.4)               | 13,728<br>(13.5)               | 10,135<br>(9.9)                | 7,244<br>(7.1)                | 2,841<br>(2.8)                | 5,220<br>(5.1)                | 26         |
| <b>26,062</b><br><b>(5.8)</b> | <b>57,468</b><br><b>(12.8)</b> | <b>59,313</b><br><b>(13.2)</b> | <b>46,399</b><br><b>(10.3)</b> | <b>38,005</b><br><b>(8.5)</b> | <b>14,538</b><br><b>(3.2)</b> | <b>23,840</b><br><b>(5.3)</b> | <b>28</b>  |
| 386,966<br>(6.2)              | 882,476<br>(14.2)              | 866,563<br>(13.9)              | 670,544<br>(10.7)              | 476,838<br>(7.6)              | 180,063<br>(2.9)              | 328,010<br>(5.3)              | 28         |

## POPULATION BY MARITAL STATUS, COUNTIES, LAKE ST. CLAIR REGION, JUNE 1, 1961

|                           |            | Total          | Single         | Married        | Widowed       | Divorced     |
|---------------------------|------------|----------------|----------------|----------------|---------------|--------------|
| <b>A-Border</b>           |            |                |                |                |               |              |
| Essex.....                | No.        | 258,218        | 122,603        | 122,057        | 12,443        | 1,115        |
|                           | %          | (100.0)        | (47.5)         | (47.3)         | (4.8)         | (0.4)        |
| Kent.....                 | No.        | 89,427         | 42,650         | 42,113         | 4,446         | 218          |
|                           | %          | (100.0)        | (47.7)         | (47.1)         | (5.0)         | (0.2)        |
| Sub-total.....            | No.        | 347,645        | 165,253        | 164,170        | 16,889        | 1,333        |
|                           | %          | (100.0)        | (47.5)         | (47.2)         | (4.9)         | (0.4)        |
| <b>B-Lambton</b>          |            |                |                |                |               |              |
| Lambton.....              | No.        | 102,131        | 49,904         | 47,551         | 4,423         | 253          |
|                           | %          | (100.0)        | (48.9)         | (46.6)         | (4.3)         | (0.2)        |
| <b>Total, Region.....</b> | <b>No.</b> | <b>449,776</b> | <b>215,157</b> | <b>211,721</b> | <b>21,312</b> | <b>1,586</b> |
|                           | <b>%</b>   | <b>(100.0)</b> | <b>(47.8)</b>  | <b>(47.1)</b>  | <b>(4.7)</b>  | <b>(0.4)</b> |

**BIRTHS, MARRIAGES AND DEATHS,  
COUNTIES, LAKE ST. CLAIR REGION, SELECTED YEARS, 1951 TO 1963**

|                        | Year | Births <sup>(1)</sup> |                              |  | Marriages |                              |  | Deaths |                              |  |
|------------------------|------|-----------------------|------------------------------|--|-----------|------------------------------|--|--------|------------------------------|--|
|                        |      | No.                   | Rate Per<br>1,000 Population |  | No.       | Rate Per<br>1,000 Population |  | No.    | Rate Per<br>1,000 Population |  |
| <b>A-Border</b>        |      |                       |                              |  |           |                              |  |        |                              |  |
| Essex.....             | 1951 | 5,887                 | 27.1                         |  | 2,282     | 10.5                         |  | 1,865  | 8.6                          |  |
|                        | 1956 | 6,836                 | 27.7                         |  | 2,194     | 8.9                          |  | 1,964  | 8.0                          |  |
|                        | 1960 | 6,327                 | 24.4                         |  | 1,821     | 7.0                          |  | 2,154  | 8.3                          |  |
|                        | 1961 | 6,160                 | 23.9                         |  | 1,769     | 6.9                          |  | 2,172  | 8.4                          |  |
|                        | 1962 | 6,038                 | 23.5                         |  | 1,678     | 6.5                          |  | 2,257  | 8.8                          |  |
|                        | 1963 | 5,937                 | 23.1                         |  | 1,789     | 7.0                          |  | 2,326  | 9.1                          |  |
| <b>Kent.....</b>       | 1951 | 2,194                 | 27.7                         |  | 750       | 9.5                          |  | 818    | 10.3                         |  |
|                        | 1956 | 2,312                 | 27.1                         |  | 760       | 8.9                          |  | 845    | 9.9                          |  |
|                        | 1960 | 2,423                 | 26.6                         |  | 676       | 7.4                          |  | 889    | 9.8                          |  |
|                        | 1961 | 2,388                 | 26.7                         |  | 672       | 7.5                          |  | 765    | 8.6                          |  |
|                        | 1962 | 2,329                 | 25.5                         |  | 697       | 7.6                          |  | 886    | 9.7                          |  |
|                        | 1963 | 2,293                 | 24.8                         |  | 703       | 7.6                          |  | 871    | 9.4                          |  |
| <b>Sub-total .....</b> | 1951 | 8,081                 | 27.3                         |  | 3,032     | 10.2                         |  | 2,683  | 9.1                          |  |
|                        | 1956 | 9,148                 | 27.5                         |  | 2,954     | 8.9                          |  | 2,809  | 8.5                          |  |
|                        | 1960 | 8,750                 | 24.9                         |  | 2,497     | 7.1                          |  | 3,043  | 8.7                          |  |
|                        | 1961 | 8,548                 | 24.6                         |  | 2,441     | 7.0                          |  | 2,937  | 8.4                          |  |
|                        | 1962 | 8,367                 | 24.1                         |  | 2,375     | 6.8                          |  | 3,143  | 9.0                          |  |
|                        | 1963 | 8,230                 | 23.6                         |  | 2,492     | 7.1                          |  | 3,197  | 9.2                          |  |
| <b>B-Lambton</b>       |      |                       |                              |  |           |                              |  |        |                              |  |
| Lambton .....          | 1951 | 2,008                 | 26.8                         |  | 610       | 8.1                          |  | 712    | 9.5                          |  |
|                        | 1956 | 2,572                 | 28.6                         |  | 670       | 7.4                          |  | 775    | 8.6                          |  |
|                        | 1960 | 2,658                 | 26.6                         |  | 656       | 6.6                          |  | 832    | 8.3                          |  |
|                        | 1961 | 2,680                 | 26.2                         |  | 680       | 6.7                          |  | 844    | 8.3                          |  |
|                        | 1962 | 2,501                 | 24.4                         |  | 696       | 6.8                          |  | 846    | 8.2                          |  |
|                        | 1963 | 2,347                 | 22.8                         |  | 661       | 6.4                          |  | 863    | 8.4                          |  |

# POPULATION, VITAL STATISTICS AND IMMIGRATION

|                      |      |         |      |        |     |        |     |
|----------------------|------|---------|------|--------|-----|--------|-----|
| Total, Region .....  | 1951 | 10,089  | 27.2 | 3,642  | 9.8 | 3,395  | 9.1 |
|                      | 1956 | 11,720  | 27.8 | 3,624  | 8.6 | 3,584  | 8.5 |
|                      | 1960 | 11,408  | 25.3 | 3,153  | 7.0 | 3,875  | 8.6 |
|                      | 1961 | 11,228  | 25.0 | 3,121  | 6.9 | 3,781  | 8.4 |
|                      | 1962 | 10,868  | 24.1 | 3,071  | 6.8 | 3,989  | 8.9 |
|                      | 1963 | 10,577  | 23.4 | 3,153  | 7.0 | 4,060  | 9.0 |
|                      |      |         |      |        |     |        |     |
| Total, Ontario ..... | 1951 | 114,827 | 25.0 | 45,198 | 9.8 | 43,981 | 9.6 |
|                      | 1956 | 143,516 | 26.6 | 46,282 | 8.6 | 47,231 | 8.7 |
|                      | 1960 | 159,245 | 26.2 | 45,855 | 7.5 | 51,484 | 8.5 |
|                      | 1961 | 157,663 | 25.3 | 44,434 | 7.1 | 50,997 | 8.2 |
|                      | 1962 | 156,053 | 24.6 | 44,454 | 7.0 | 52,156 | 8.2 |
|                      | 1963 | 155,089 | 24.1 | 45,306 | 7.0 | 53,617 | 8.3 |

(1) Live births only.

Note: For 1951 births, marriages and deaths are by place of residence. For 1956, 1960, 1961, 1962 and 1963, births are by place of residence of mothers, marriages by place of occurrence and deaths by place of residence.



# POPULATION, VITAL STATISTICS AND IMMIGRATION

## POPULATION BY BIRTHPLACE AND PERIOD OF IMMIGRATION, COUNTIES, LAKE ST. CLAIR REGION, 1961

|                             | Total          | Country of Birth |             |               |             |
|-----------------------------|----------------|------------------|-------------|---------------|-------------|
|                             |                | Canada           |             | Other         |             |
|                             |                | No.              | %           | No.           | %           |
| <b>A—Border</b>             |                |                  |             |               |             |
| Essex.....                  | 258,218        | 201,235          | 77.9        | 56,983        | 22.1        |
| Kent.....                   | 89,427         | 75,329           | 84.2        | 14,098        | 15.8        |
| Sub-total.....              | 347,645        | 276,564          | 79.6        | 71,081        | 20.4        |
| <b>B—Lambton</b>            |                |                  |             |               |             |
| Lambton.....                | 102,131        | 86,542           | 84.7        | 15,589        | 15.3        |
| <b>Total Region.....</b>    | <b>449,776</b> | <b>363,106</b>   | <b>80.7</b> | <b>86,670</b> | <b>19.3</b> |
| Total, Ontario.....         | 6,236,092      | 4,882,935        | 78.3        | 1,353,157     | 21.7        |
| Region as % of Ontario..... | 7.2            | 7.4              |             | 6.4           |             |

## POPULATION BY SPECIFIED ETHNIC GROUPS, COUNTIES, LAKE ST. CLAIR REGION, 1961

| Country                | A—Border       |               |                | B—Lambton      | Total          |
|------------------------|----------------|---------------|----------------|----------------|----------------|
|                        | Essex          | Kent          | Sub-total      | Lambton        | Region         |
|                        | No.            |               |                |                |                |
| British Isles.....     | 120,159        | 54,279        | 174,438        | 71,347         | 245,785        |
| French.....            | 55,337         | 11,014        | 66,351         | 7,448          | 73,799         |
| German.....            | 16,831         | 3,450         | 20,281         | 4,127          | 24,408         |
| Netherlands.....       | 4,539          | 6,581         | 11,120         | 6,219          | 17,339         |
| Italian.....           | 13,596         | 747           | 14,343         | 1,420          | 15,763         |
| Polish.....            | 6,739          | 907           | 7,646          | 1,292          | 8,938          |
| Ukrainian.....         | 6,423          | 823           | 7,246          | 875            | 8,121          |
| Czech and Slovak....   | 3,072          | 1,831         | 4,903          | 1,092          | 5,995          |
| Hungarian.....         | 4,757          | 675           | 5,432          | 452            | 5,884          |
| Scandinavian.....      | 1,637          | 533           | 2,170          | 929            | 3,099          |
| Austrian.....          | 1,792          | 222           | 2,014          | 261            | 2,275          |
| Russian.....           | 1,869          | 119           | 1,988          | 190            | 2,178          |
| Jewish.....            | 1,426          | 111           | 1,537          | 113            | 1,650          |
| Other European.....    | 11,830         | 4,968         | 16,798         | 2,071          | 18,869         |
| Asiatic.....           | 2,610          | 341           | 2,951          | 170            | 3,121          |
| Indian and Eskimo....  | 252            | 412           | 664            | 2,193          | 2,857          |
| Other and Not Stated.. | 5,349          | 2,414         | 7,763          | 1,932          | 9,695          |
| <b>Total.....</b>      | <b>258,218</b> | <b>89,427</b> | <b>347,645</b> | <b>102,131</b> | <b>449,776</b> |

# POPULATION, VITAL STATISTICS AND IMMIGRATION

|                                | Period of Immigration |               |              |              |               |               |               |
|--------------------------------|-----------------------|---------------|--------------|--------------|---------------|---------------|---------------|
|                                | Before 1921           | 1921-30       | 1931-40      | 1941-45      | 1946-50       | 1951-55       | 1956-61       |
|                                | No. of persons        |               |              |              |               |               |               |
| <b>A—Border</b>                |                       |               |              |              |               |               |               |
| Essex.....                     | 11,159                | 14,396        | 3,084        | 825          | 7,238         | 11,889        | 8,392         |
| Kent.....                      | 2,881                 | 3,266         | 800          | 176          | 2,202         | 2,625         | 2,148         |
| Sub-total....                  | 14,040                | 17,662        | 3,884        | 1,001        | 9,440         | 14,514        | 10,540        |
| <b>B—Lambton</b>               |                       |               |              |              |               |               |               |
| Lambton....                    | 2,521                 | 2,143         | 766          | 257          | 2,659         | 4,250         | 2,993         |
| <b>Total Region...</b>         | <b>16,561</b>         | <b>19,805</b> | <b>4,650</b> | <b>1,258</b> | <b>12,099</b> | <b>18,764</b> | <b>13,533</b> |
| Total, Ontario....             | 264,366               | 198,339       | 41,959       | 15,190       | 169,044       | 323,528       | 340,731       |
| Region as %<br>of Ontario..... | 6.3                   | 10.0          | 11.1         | 8.3          | 7.2           | 5.8           | 4.0           |

| A—Border                   |       |           | B—Lambton | Total  |
|----------------------------|-------|-----------|-----------|--------|
| Essex                      | Kent  | Sub-total | Lambton   | Region |
| ----- % distribution ----- |       |           |           |        |
| 46.5                       | 60.7  | 50.2      | 69.9      | 54.6   |
| 21.4                       | 12.3  | 19.1      | 7.3       | 16.4   |
| 6.5                        | 3.9   | 5.8       | 4.0       | 5.4    |
| 1.8                        | 7.4   | 3.2       | 6.1       | 3.9    |
| 5.3                        | 0.8   | 4.1       | 1.4       | 3.5    |
| 2.6                        | 1.0   | 2.2       | 1.3       | 2.0    |
| 2.5                        | 0.9   | 2.1       | 0.9       | 1.8    |
| 1.2                        | 2.0   | 1.4       | 1.1       | 1.3    |
| 1.8                        | 0.8   | 1.6       | 0.4       | 1.3    |
| 0.6                        | 0.6   | 0.6       | 0.9       | 0.7    |
| 0.7                        | 0.2   | 0.6       | 0.2       | 0.5    |
| 0.7                        | 0.1   | 0.6       | 0.2       | 0.5    |
| 0.6                        | 0.1   | 0.4       | 0.1       | 0.4    |
| 4.6                        | 5.6   | 4.8       | 2.0       | 4.2    |
| 1.0                        | 0.4   | 0.9       | 0.2       | 0.7    |
| 0.1                        | 0.5   | 0.2       | 2.1       | 0.6    |
| 2.1                        | 2.7   | 2.2       | 1.9       | 2.2    |
| 100.0                      | 100.0 | 100.0     | 100.0     | 100.0  |

# POPULATION, VITAL STATISTICS AND IMMIGRATION

## POPULATION PROJECTIONS, LAKE ST. CLAIR REGION, 1966 TO 1986, BASED ON 1961 CENSUS POPULATION

Assumption A: Net migration to Ontario 10,000 per annum  
Net Internal migration 2,000 per annum

| Age<br>Group | Census<br>1961 | Projections    |                |                |                |                |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|
|              |                | 1966           | 1971           | 1976           | 1981           | 1986           |
| 0- 4         | 54,606         | 56,100         | 65,200         | 79,700         | 93,900         | 106,200        |
| 5- 9         | 51,259         | 54,100         | 55,900         | 64,700         | 79,100         | 93,200         |
| 10-14        | 45,037         | 51,200         | 54,300         | 55,900         | 64,800         | 79,200         |
| 15-19        | 33,249         | 44,800         | 51,200         | 54,300         | 55,900         | 64,800         |
| 20-24        | 26,062         | 32,800         | 44,700         | 51,100         | 54,200         | 55,900         |
| 25-34        | 57,468         | 52,800         | 59,400         | 78,500         | 96,700         | 106,200        |
| 35-44        | 59,313         | 62,200         | 57,500         | 53,400         | 59,900         | 78,900         |
| 45-54        | 46,399         | 51,000         | 58,000         | 61,000         | 56,400         | 52,400         |
| 55-64        | 38,005         | 40,000         | 43,100         | 47,600         | 54,100         | 57,000         |
| 65-69        | 14,538         | 16,300         | 17,400         | 18,200         | 20,400         | 22,300         |
| 70 +         | 23,840         | 28,300         | 32,500         | 36,500         | 39,700         | 43,500         |
| <b>Total</b> | <b>449,776</b> | <b>489,600</b> | <b>539,200</b> | <b>600,900</b> | <b>675,100</b> | <b>759,600</b> |

# POPULATION, VITAL STATISTICS AND IMMIGRATION

| Assumption B: Net migration to Ontario 30,000 per annum<br>Net Internal migration 6,000 per annum |                |                |                |                |
|---|----------------|----------------|----------------|----------------|
| ----- Projections -----   |                |                |                |                |
| 1966  | 1971           | 1976           | 1981           | 1986           |
| 57,300  | 67,500         | 83,000         | 98,400         | 110,900        |
| 54,600  | 57,200         | 67,200         | 82,500         | 97,800         |
| 51,500  | 55,200         | 57,600         | 67,500         | 83,000         |
| 45,200  | 52,000         | 55,700         | 58,100         | 67,900         |
| 33,500  | 45,800         | 52,700         | 56,500         | 58,900         |
| 54,300  | 62,400         | 82,400         | 101,900        | 112,600        |
| 63,000  | 59,400         | 56,600         | 64,300         | 84,400         |
| 51,300  | 58,800         | 62,600         | 59,000         | 56,200         |
| 40,200  | 43,500         | 48,300         | 55,400         | 59,000         |
| 16,300  | 17,500         | 18,400         | 20,700         | 22,900         |
| 28,500  | 32,700         | 36,800         | 40,200         | 44,200         |
| <b>495,700</b>  | <b>552,000</b> | <b>621,300</b> | <b>704,500</b> | <b>797,800</b> |

## POPULATION BY OFFICIAL LANGUAGE, COUNTIES, LAKE ST. CLAIR REGION, JUNE 1, 1961

|                            |            | Total          | English        | French<br>Only | English<br>and<br>French | Neither<br>English<br>nor French |
|----------------------------|------------|----------------|----------------|----------------|--------------------------|----------------------------------|
| <b>A—Border</b>            |            |                |                |                |                          |                                  |
| Essex .....                | No.        | 258,218        | 221,504        | 2,081          | 31,580                   | 3,053                            |
|                            | %          | (100.0)        | (85.8)         | (0.8)          | (12.2)                   | (1.2)                            |
| Kent .....                 | No.        | 89,427         | 82,838         | 369            | 5,845                    | 365                              |
|                            | %          | (100.0)        | (92.6)         | (0.4)          | (6.5)                    | (0.5)                            |
| Sub-total .....            | No.        | 347,645        | 304,342        | 2,450          | 37,425                   | 3,428                            |
|                            | %          | (100.0)        | (87.5)         | (0.7)          | (10.8)                   | (1.0)                            |
| <b>B—Lambton</b>           |            |                |                |                |                          |                                  |
| Lambton .....              | No.        | 102,131        | 96,255         | 371            | 4,943                    | 562                              |
|                            | %          | (100.0)        | (94.2)         | (0.4)          | (4.8)                    | (0.6)                            |
| <b>Total, Region.....</b>  | <b>No.</b> | <b>449,776</b> | <b>400,597</b> | <b>2,821</b>   | <b>42,368</b>            | <b>3,990</b>                     |
|                            | <b>%</b>   | <b>(100.0)</b> | <b>(89.1)</b>  | <b>(0.6)</b>   | <b>(9.4)</b>             | <b>(0.9)</b>                     |
| Total, Ontario.....        | No.        | 6,236,092      | 5,548,766      | 95,236         | 493,270                  | 98,820                           |
|                            | %          | (100.0)        | (89.0)         | (1.5)          | (7.9)                    | (1.6)                            |
| Region as % of Ontario.... |            | 7.2            | 7.2            | 3.0            | 8.6                      | 4.0                              |

**LABOUR FORCE, AS A PER CENT OF POPULATION 15 YEARS  
AND OVER, COUNTIES, LAKE ST. CLAIR REGION, 1961**

|                             | Total                              |                |                    | Males                         |                |                    | Females                       |               |                    |
|-----------------------------|------------------------------------|----------------|--------------------|-------------------------------|----------------|--------------------|-------------------------------|---------------|--------------------|
|                             | Population<br>15 Years<br>and Over | Labour Force   |                    | Total<br>15 Years<br>and Over | Labour Force   |                    | Total<br>15 Years<br>and Over | Labour Force  |                    |
|                             |                                    | No.            | % of<br>Population |                               | No.            | % of<br>Population |                               | No.           | % of<br>Population |
| <b>A—Border</b>             |                                    |                |                    |                               |                |                    |                               |               |                    |
| Essex.....                  | 172,604                            | 92,279         | 53.5               | 85,294                        | 66,575         | 78.1               | 87,310                        | 25,704        | 29.4               |
| Kent.....                   | 59,704                             | 32,118         | 53.8               | 29,741                        | 23,799         | 80.0               | 29,963                        | 8,319         | 27.8               |
| Sub-total.....              | 232,308                            | 124,397        | 53.5               | 115,035                       | 90,374         | 78.6               | 117,273                       | 34,023        | 29.0               |
| <b>B—Lambton</b>            |                                    |                |                    |                               |                |                    |                               |               |                    |
| Lambton.....                | 66,566                             | 36,608         | 55.0               | 33,673                        | 27,530         | 81.8               | 32,893                        | 9,078         | 27.6               |
| <b>Total, Region.....</b>   | <b>298,874</b>                     | <b>161,005</b> | <b>53.9</b>        | <b>148,708</b>                | <b>117,904</b> | <b>79.3</b>        | <b>150,166</b>                | <b>43,101</b> | <b>28.7</b>        |
| Total, Ontario.....         | 4,228,343                          | 2,393,015      | 56.6               | 2,106,048                     | 1,700,567      | 80.7               | 2,122,295                     | 692,448       | 32.6               |
| Region as % of Ontario..... | 7.1                                | 6.7            |                    | 7.1                           | 6.9            |                    | 7.1                           | 6.2           |                    |



LABOUR FORCE, AS A PER CENT OF POPULATION 14 YEARS AND OVER,  
COUNTIES, LAKE ST. CLAIR REGION, 1941 AND 1951

|                             | Year        | Total                              |                |                    | Males                         |                |                    | Females                       |               |                    |
|-----------------------------|-------------|------------------------------------|----------------|--------------------|-------------------------------|----------------|--------------------|-------------------------------|---------------|--------------------|
|                             |             | Population<br>14 Years<br>and Over | Labour Force   |                    | Total<br>14 Years<br>and Over | Labour Force   |                    | Total<br>14 Years<br>and Over | Labour Force  |                    |
|                             |             |                                    | No.            | % of<br>Population |                               | No.            | % of<br>Population |                               | No.           | % of<br>Population |
|                             |             |                                    |                |                    |                               |                |                    |                               |               |                    |
| <b>A—Border</b>             |             |                                    |                |                    |                               |                |                    |                               |               |                    |
| Essex.....                  | 1941        | 131,109                            | 66,922         | 51.0               | 68,269                        | 56,140         | 82.2               | 62,840                        | 10,782        | 17.2               |
|                             | 1951        | 158,693                            | 87,664         | 55.2               | 80,734                        | 69,518         | 86.1               | 77,959                        | 18,146        | 23.3               |
| Kent.....                   | 1941        | 50,052                             | 25,651         | 51.2               | 25,560                        | 21,727         | 85.0               | 24,492                        | 3,924         | 16.0               |
|                             | 1951        | 57,021                             | 30,046         | 52.7               | 28,849                        | 24,451         | 84.8               | 28,172                        | 5,595         | 19.9               |
| Sub-total.....              | 1941        | 181,161                            | 92,573         | 51.1               | 93,829                        | 77,867         | 83.0               | 87,332                        | 14,706        | 16.8               |
|                             | 1951        | 215,714                            | 117,710        | 54.6               | 109,583                       | 93,969         | 85.8               | 106,131                       | 23,741        | 22.4               |
| <b>B—Lambton</b>            |             |                                    |                |                    |                               |                |                    |                               |               |                    |
| Lambton.....                | 1941        | 43,581                             | 21,800         | 50.0               | 22,313                        | 18,593         | 83.3               | 21,268                        | 3,207         | 15.1               |
|                             | 1951        | 54,086                             | 28,367         | 52.4               | 27,646                        | 23,252         | 84.1               | 26,440                        | 5,115         | 19.3               |
| <b>Total, Region</b> .....  | <b>1941</b> | <b>224,742</b>                     | <b>114,373</b> | <b>50.9</b>        | <b>116,142</b>                | <b>96,460</b>  | <b>83.1</b>        | <b>108,600</b>                | <b>17,913</b> | <b>16.5</b>        |
|                             | <b>1951</b> | <b>269,800</b>                     | <b>146,077</b> | <b>54.1</b>        | <b>137,229</b>                | <b>117,221</b> | <b>85.4</b>        | <b>132,571</b>                | <b>28,856</b> | <b>21.8</b>        |
| Total, Ontario.....         | 1941        | 2,928,089                          | 1,563,126      | 53.4               | 1,485,239                     | 1,244,987      | 83.8               | 1,442,850                     | 318,139       | 22.0               |
|                             | 1951        | 3,418,502                          | 1,887,551      | 55.2               | 1,711,373                     | 1,441,444      | 84.2               | 1,707,129                     | 446,107       | 26.1               |
| Region as % of Ontario..... | 1941        | 7.7                                | 7.3            |                    | 7.8                           | 7.7            |                    | 7.5                           | 5.6           |                    |
|                             | 1951        | 7.9                                | 7.7            |                    | 8.0                           | 8.1            |                    | 7.8                           | 6.5           |                    |

# LABOUR FORCE, EARNINGS AND INCOME

## INDUSTRY DIVISIONS AND MAJOR GROUPS OF THE LABOUR FORCE BY SEX, COUNTIES, LAKE ST. CLAIR REGION, 1961

|                           |               | Total, All Industries | Agri-culture  | Forestry  | Fishing and Trapping | Mines (including milling) and Quarries |
|---------------------------|---------------|-----------------------|---------------|-----------|----------------------|--|
| <b>A—Border</b>           |               |                       |               |           |                      |  |
| Essex.....                | Male          | 66,575                | 6,274         | 14        | 197                  | 395                                    |
|                           | Female        | 25,704                | 1,598         | 2         | 6                    | 20                                     |
|                           | Total         | 92,279                | 7,872         | 16        | 203                  | 415                                    |
| Kent.....                 | Male          | 23,799                | 6,328         | 33        | 133                  | 138                                    |
|                           | Female        | 8,319                 | 780           | —         | 1                    | 9                                      |
|                           | Total         | 32,118                | 7,108         | 33        | 134                  | 147                                    |
| Sub-total.....            | Male          | 90,374                | 12,602        | 47        | 330                  | 533                                    |
|                           | Female        | 34,023                | 2,378         | 2         | 7                    | 29                                     |
|                           | Total         | 124,397               | 14,980        | 49        | 337                  | 562                                    |
| <b>B—Lambton</b>          |               |                       |               |           |                      |  |
| Lambton.....              | Male          | 27,530                | 4,534         | 14        | 39                   | 149                                    |
|                           | Female        | 9,078                 | 631           | 1         | 1                    | 6                                      |
|                           | Total         | 36,608                | 5,165         | 15        | 40                   | 155                                    |
| <b>Total, Region.....</b> | <b>Male</b>   | <b>117,904</b>        | <b>17,136</b> | <b>61</b> | <b>369</b>           | <b>682</b>                             |
|                           | <b>Female</b> | <b>43,101</b>         | <b>3,009</b>  | <b>3</b>  | <b>8</b>             | <b>35</b>                              |
|                           | <b>Total</b>  | <b>161,005</b>        | <b>20,145</b> | <b>64</b> | <b>377</b>           | <b>717</b>                             |

# LABOUR FORCE, EARNINGS AND INCOME

| Manufacturing | Construction  | Transportation<br>Communication<br>and Other<br>Utilities | Trade         | Finance<br>Insurance<br>and<br>Real Estate | Community,<br>Business and<br>Personal<br>Service | Public<br>Administration<br>and<br>Defence | Not<br>Stated |
|---------------|---------------|---|---------------|--|---|--|---------------|
| 25,999        | 4,983         | 5,728   | 9,554         | 1,489                                      | 7,441   | 2,974                                      | 1,527         |
| 4,397         | 187           | 941   | 4,438         | 1,676                                      | 11,344  | 726  | 369           |
| 30,396        | 5,170         | 6,669   | 13,992        | 3,165                                      | 18,785  | 3,700                                      | 1,896         |
| 5,907         | 1,831         | 2,135   | 3,627         | 424  | 2,029   | 777  | 437           |
| 1,166         | 41            | 426   | 1,468         | 333  | 3,723   | 238  | 134           |
| 7,073         | 1,872         | 2,561   | 5,095         | 757  | 5,752   | 1,015                                      | 571           |
| 31,906        | 6,814         | 7,863   | 13,181        | 1,913                                      | 9,470   | 3,751                                      | 1,964         |
| 5,563         | 228           | 1,367   | 5,906         | 2,009                                      | 15,067  | 964  | 503           |
| 37,469        | 7,042         | 9,230   | 19,087        | 3,922                                      | 24,537  | 4,715                                      | 2,467         |
| 9,241         | 3,055         | 2,357   | 3,182         | 528  | 2,116   | 1,735                                      | 580           |
| 1,224         | 92            | 375   | 1,620         | 413  | 4,290   | 292  | 133           |
| 10,465        | 3,147         | 2,732   | 4,802         | 941  | 6,406   | 2,027                                      | 713           |
| <b>41,147</b> | <b>9,869</b>  | <b>10,220</b>   | <b>16,363</b> | <b>2,441</b>                               | <b>11,586</b>                                     | <b>5,486</b>                               | <b>2,544</b>  |
| <b>6,787</b>  | <b>320</b>    | <b>1,742</b>  | <b>7,526</b>  | <b>2,422</b>                               | <b>19,357</b>                                     | <b>1,256</b>                               | <b>636</b>    |
| <b>47,934</b> | <b>10,189</b> | <b>11,962</b>   | <b>23,889</b> | <b>4,863</b>                               | <b>30,943</b>                                     | <b>6,742</b>                               | <b>3,180</b>  |

## PARTICIPATION RATES AND LABOUR FORCE BY AGE GROUP AND SEX, LAKE ST. CLAIR REGION, 1961 AND PROJECTED 1976

|                          | 1961                         |                 |                            | 1976 (Assumption B)                   |                          |                            |
|--------------------------|------------------------------|-----------------|----------------------------|---------------------------------------|--------------------------|----------------------------|
|                          | Population<br>15 yrs. & over | Labour<br>Force | Participation<br>Rate<br>% | Population<br>15 yrs. & over<br>000's | Labour<br>Force<br>000's | Participation<br>Rate<br>% |
| <b>Male</b>              |                              |                 |                            |                                       |                          |                            |
| 15-24.....               | 29,597                       | 17,617          | 59.5                       | 54.1                                  | 29.8                     | 55                         |
| 25-44.....               | 57,717                       | 55,309          | 95.8                       | 68.7                                  | 65.3                     | 95                         |
| 45-64.....               | 43,033                       | 38,954          | 90.5                       | 56.5                                  | 50.3                     | 89                         |
| 65 +.....                | 18,361                       | 6,024           | 32.8                       | 26.4                                  | 6.9                      | 26                         |
| <b>Total.....</b>        | <b>148,708</b>               | <b>117,904</b>  | <b>79.3</b>                | <b>205.7</b>                          | <b>152.3</b>             | <b>74</b>                  |
| <b>Female</b>            |                              |                 |                            |                                       |                          |                            |
| 15-24.....               | 29,714                       | 11,011          | 37.1                       | 54.3                                  | 19.0                     | 35                         |
| 25-44.....               | 59,064                       | 18,398          | 31.2                       | 70.3                                  | 23.9                     | 34                         |
| 45-64.....               | 41,371                       | 12,294          | 29.7                       | 54.4                                  | 18.5                     | 34                         |
| 65 +.....                | 20,017                       | 1,398           | 7.0                        | 28.8                                  | 2.0                      | 7                          |
| <b>Total.....</b>        | <b>150,166</b>               | <b>43,101</b>   | <b>28.7</b>                | <b>207.8</b>                          | <b>63.4</b>              | <b>31</b>                  |
| <b>Males and Females</b> |                              |                 |                            |                                       |                          |                            |
| 15-24.....               | 59,311                       | 28,628          | 48.3                       | 108.4                                 | 48.8                     | 45                         |
| 25-44.....               | 116,781                      | 73,707          | 63.1                       | 139.0                                 | 89.2                     | 64                         |
| 45-64.....               | 84,404                       | 51,248          | 60.7                       | 110.9                                 | 68.8                     | 62                         |
| 65 +.....                | 38,378                       | 7,422           | 19.3                       | 55.2                                  | 8.9                      | 16                         |
| <b>Total.....</b>        | <b>298,874</b>               | <b>161,005</b>  | <b>53.9</b>                | <b>413.5</b>                          | <b>215.7</b>             | <b>52</b>                  |

# LABOUR FORCE, EARNINGS AND INCOME

## INDUSTRY DIVISIONS AND MAJOR GROUPS OF THE LABOUR FORCE BY SEX, PERCENTAGE DISTRIBUTION, COUNTIES, LAKE ST. CLAIR REGION, 1961

|                                |               | Total, All<br>Industries | Agri-<br>culture | Forestry   | Fishing<br>and<br>Trapping | Mines<br>(including<br>milling) and<br>Quarries |
|--------------------------------|---------------|--------------------------|------------------|------------|----------------------------|---|
| <b>A—Border</b>                |               |                          |                  |            |                            |   |
| Essex . . . . .                | Male          | 100.0                    | 9.4              | 0.0        | 0.3                        | 0.6   |
|                                | Female        | 100.0                    | 6.2              | 0.0        | 0.0                        | 0.0   |
|                                | Total         | 100.0                    | 8.5              | 0.0        | 0.2                        | 0.5   |
| Kent . . . . .                 | Male          | 100.0                    | 26.6             | 0.1        | 0.6                        | 0.6   |
|                                | Female        | 100.0                    | 9.4              | —          | 0.0                        | 0.1   |
|                                | Total         | 100.0                    | 22.1             | 0.1        | 0.4                        | 0.5   |
| Sub-total . . . . .            | Male          | 100.0                    | 13.9             | 0.1        | 0.4                        | 0.6   |
|                                | Female        | 100.0                    | 7.0              | 0.0        | 0.0                        | 0.1   |
|                                | Total         | 100.0                    | 12.0             | 0.0        | 0.3                        | 0.5   |
| <b>B—Lambton</b>               |               |                          |                  |            |                            |   |
| Lambton . . . . .              | Male          | 100.0                    | 16.5             | 0.0        | 0.1                        | 0.5   |
|                                | Female        | 100.0                    | 7.0              | 0.0        | 0.0                        | 0.1   |
|                                | Total         | 100.0                    | 14.1             | 0.0        | 0.1                        | 0.4   |
| <b>Total, Region . . . . .</b> | <b>Male</b>   | <b>100.0</b>             | <b>14.5</b>      | <b>0.0</b> | <b>0.3</b>                 | <b>0.6</b>                                      |
|                                | <b>Female</b> | <b>100.0</b>             | <b>7.0</b>       | <b>0.0</b> | <b>0.0</b>                 | <b>0.1</b>                                      |
|                                | <b>Total</b>  | <b>100.0</b>             | <b>12.5</b>      | <b>0.0</b> | <b>0.2</b>                 | <b>0.5</b>                                      |

# LABOUR FORCE, EARNINGS AND INCOME

| Manufacturing | Construction | Transportation,<br>Communication<br>and Other<br>Utilities | Trade | Finance,<br>Insurance<br>and<br>Real Estate | Community,<br>Business and<br>Personal<br>Service | Public<br>Administration<br>and<br>Defence | Not<br>Stated |
|---------------|--------------|--|-------|---|---|--|---------------|
| 39.1          | 7.5          | 8.6  | 14.3  | 2.2   | 11.2  | 4.5  | 2.3           |
| 17.1          | 0.7          | 3.7  | 17.3  | 6.5   | 44.2  | 2.8  | 1.5           |
| 32.9          | 5.6          | 7.2  | 15.2  | 3.4   | 20.4  | 4.0  | 2.1           |
| 24.8          | 7.7          | 9.0  | 15.2  | 1.8   | 8.5   | 3.3  | 1.8           |
| 14.0          | 0.5          | 5.1  | 17.6  | 4.0   | 44.8  | 2.9  | 1.6           |
| 22.0          | 5.8          | 8.0  | 15.9  | 3.2   | 17.9  | 2.3  | 1.8           |
| 35.3          | 7.5          | 8.7  | 14.6  | 2.1   | 10.5  | 4.1  | 2.2           |
| 16.3          | 0.7          | 4.0  | 17.4  | 5.9   | 44.3  | 2.8  | 1.5           |
| 30.1          | 5.7          | 7.4  | 15.3  | 3.2   | 19.7  | 3.8  | 2.0           |
| 33.6          | 11.1         | 8.6  | 11.6  | 1.9   | 7.7   | 6.3  | 2.1           |
| 13.5          | 1.0          | 4.1  | 17.8  | 4.5   | 47.3  | 3.2  | 1.5           |
| 28.6          | 8.6          | 7.5  | 13.1  | 2.6   | 17.5  | 5.5  | 2.0           |
| 34.9          | 8.4          | 8.7  | 13.9  | 2.1   | 9.8   | 4.7  | 2.1           |
| 15.8          | 0.7          | 4.0  | 17.5  | 5.6   | 44.9  | 2.9  | 1.5           |
| 29.8          | 6.3          | 7.4  | 14.9  | 3.0   | 19.2  | 4.2  | 2.0           |



# LABOUR FORCE, EARNINGS AND INCOME

## OCCUPATION DIVISIONS OF THE LABOUR FORCE <sup>(1)</sup> BY SEX, COUNTIES, LAKE ST. CLAIR REGION, 1961

|                                |               | Total, All<br>Occupations <sup>(2)</sup> | Man-<br>agerial | Profes-<br>sional<br>and<br>Technical | Clerical      | Sales         | Service<br>and<br>Recreation |
|--------------------------------|---------------|--|-----------------|---------------------------------------|---------------|---------------|------------------------------|
| <b>A—Border</b>                |               |  |                 |                                       |               |               |                              |
| Essex . . . . .                | Male          | 66,575                                   | 7,000           | 4,863                                 | 5,151         | 3,691         | 4,928                        |
|                                | Female        | 25,704                                   | 922             | 3,847                                 | 7,542         | 2,443         | 5,871                        |
|                                | Total         | 92,279                                   | 7,922           | 8,710                                 | 12,693        | 6,134         | 10,799                       |
| Kent . . . . .                 | Male          | 23,799                                   | 2,397           | 1,151                                 | 1,219         | 1,278         | 1,211                        |
|                                | Female        | 8,319                                    | 245             | 1,329                                 | 2,006         | 846           | 2,013                        |
|                                | Total         | 32,118                                   | 2,642           | 2,480                                 | 3,225         | 2,124         | 3,224                        |
| Sub-total . . . . .            | Male          | 90,374                                   | 9,397           | 6,014                                 | 6,370         | 4,969         | 6,139                        |
|                                | Female        | 34,023                                   | 1,167           | 5,176                                 | 9,548         | 3,289         | 7,884                        |
|                                | Total         | 124,397                                  | 10,564          | 11,190                                | 15,918        | 8,258         | 14,023                       |
| <b>B—Lambton</b>               |               |  |                 |                                       |               |               |                              |
| Lambton . . . . .              | Male          | 27,530                                   | 2,461           | 2,718                                 | 1,146         | 1,182         | 2,149                        |
|                                | Female        | 9,078                                    | 294             | 1,501                                 | 2,398         | 987           | 2,378                        |
|                                | Total         | 36,608                                   | 2,755           | 4,219                                 | 3,544         | 2,169         | 4,527                        |
| <b>Total, Region . . . . .</b> | <b>Male</b>   | <b>117,904</b>                           | <b>11,858</b>   | <b>8,732</b>                          | <b>7,516</b>  | <b>6,151</b>  | <b>8,288</b>                 |
|                                | <b>Female</b> | <b>43,101</b>                            | <b>1,461</b>    | <b>6,677</b>                          | <b>11,946</b> | <b>4,276</b>  | <b>10,262</b>                |
|                                | <b>Total</b>  | <b>161,005</b>                           | <b>13,319</b>   | <b>15,409</b>                         | <b>19,462</b> | <b>10,427</b> | <b>18,550</b>                |

(1) Excludes a few persons seeking work who had never been employed.

(2) Includes persons not reporting occupation.

# LABOUR FORCE, EARNINGS AND INCOME

| Transport<br>and<br>Communi-<br>cation | Farmers and<br>Farm Workers |                             | Loggers,<br>Fishermen,<br>Trappers<br>and<br>Hunters | Miners,<br>Quarrymen<br>and<br>Related<br>Workers | Craftsmen,<br>Production<br>Process and<br>Related<br>Workers | Labourers | Occu-<br>pation<br>Not<br>Stated |
|--|-----------------------------|-----------------------------|--|---|---|-----------|----------------------------------|
|  | Total                       | Farmers and<br>Stockraisers |  |   |   |           |                                  |
| 5,237                                  | 6,465                       | 3,779                       | 196  | 136   | 23,905  | 3,349     | 1,654                            |
| 497                                    | 1,571                       | 85                          | 3  | —   | 2,360   | 279       | 369                              |
| 5,734                                  | 8,036                       | 3,864                       | 199  | 136   | 26,265  | 3,628     | 2,023                            |
| 1,628                                  | 6,374                       | 4,234                       | 170  | 79  | 6,667   | 1,172     | 453                              |
| 175                                    | 747                         | 61                          | 2  | —   | 709   | 108       | 139                              |
| 1,803                                  | 7,121                       | 4,295                       | 172  | 79  | 7,376   | 1,280     | 592                              |
| 6,865                                  | 12,839                      | 8,013                       | 366  | 215   | 30,572  | 4,521     | 2,107                            |
| 672                                    | 2,318                       | 146                         | 5  | —   | 3,069   | 387       | 508                              |
| 7,537                                  | 15,157                      | 8,159                       | 371  | 215   | 33,641  | 4,908     | 2,615                            |
| 1,919                                  | 4,572                       | 3,288                       | 48   | 96  | 8,997   | 1,646     | 596                              |
| 221                                    | 587                         | 64                          | 1  | —   | 439   | 132       | 140                              |
| 2,140                                  | 5,159                       | 3,352                       | 49   | 96  | 9,436   | 1,778     | 736                              |
| 8,784                                  | 17,411                      | 11,301                      | 414  | 311   | 39,569  | 6,167     | 2,703                            |
| 893                                    | 2,905                       | 210                         | 6  | —   | 3,508   | 519       | 648                              |
| 9,677                                  | 20,316                      | 11,511                      | 420  | 311   | 43,077  | 6,686     | 3,351                            |

# LABOUR FORCE, EARNINGS AND INCOME

## OCCUPATION DIVISIONS OF THE LABOUR FORCE BY SEX, PERCENTAGE DISTRIBUTION, COUNTIES, LAKE ST. CLAIR REGION, 1961

|                           |               | Total, All<br>Occupations | Man-<br>agerial | Profes-<br>sional<br>and<br>Technical | Clerical    | Sales      | Service<br>and<br>Recreation |
|---------------------------|---------------|---------------------------|-----------------|---------------------------------------|-------------|------------|------------------------------|
| <b>A—Border</b>           |               |                           |                 |                                       |             |            |                              |
| Essex.....                | Male          | 100.0                     | 10.5            | 7.3                                   | 7.7         | 5.6        | 7.4                          |
|                           | Female        | 100.0                     | 3.6             | 15.0                                  | 29.4        | 9.5        | 22.8                         |
|                           | Total         | 100.0                     | 8.6             | 9.4                                   | 13.8        | 6.6        | 11.7                         |
| Kent.....                 | Male          | 100.0                     | 10.1            | 4.8                                   | 5.1         | 5.4        | 5.1                          |
|                           | Female        | 100.0                     | 2.9             | 16.0                                  | 24.1        | 10.2       | 24.2                         |
|                           | Total         | 100.0                     | 8.2             | 7.7                                   | 10.0        | 6.6        | 10.0                         |
| Sub-total.....            | Male          | 100.0                     | 10.4            | 6.7                                   | 7.1         | 5.5        | 6.8                          |
|                           | Female        | 100.0                     | 3.4             | 15.2                                  | 28.1        | 9.7        | 23.2                         |
|                           | Total         | 100.0                     | 8.5             | 9.0                                   | 12.8        | 6.6        | 11.3                         |
| <b>B—Lambton</b>          |               |                           |                 |                                       |             |            |                              |
| Lambton.....              | Male          | 100.0                     | 8.9             | 9.9                                   | 4.1         | 4.3        | 7.8                          |
|                           | Female        | 100.0                     | 3.2             | 16.5                                  | 26.4        | 10.9       | 26.2                         |
|                           | Total         | 100.0                     | 7.5             | 11.5                                  | 9.7         | 5.9        | 12.4                         |
| <b>Total, Region.....</b> | <b>Male</b>   | <b>100.0</b>              | <b>10.1</b>     | <b>7.4</b>                            | <b>6.4</b>  | <b>5.2</b> | <b>7.0</b>                   |
|                           | <b>Female</b> | <b>100.0</b>              | <b>3.4</b>      | <b>15.5</b>                           | <b>27.7</b> | <b>9.9</b> | <b>23.8</b>                  |
|                           | <b>Total</b>  | <b>100.0</b>              | <b>8.3</b>      | <b>9.6</b>                            | <b>12.1</b> | <b>6.5</b> | <b>11.5</b>                  |

# LABOUR FORCE, EARNINGS AND INCOME

| Transport<br>and<br>Communi-<br>cation | Farmers and<br>Farm Workers |                             | Loggers,<br>Fishermen,<br>Trappers<br>and<br>Hunters | Miners,<br>Quarrymen<br>and<br>Related<br>Workers | Craftsmen,<br>Production<br>Process and<br>Related<br>Workers | Labourers | Occu-<br>pation<br>Not<br>Stated |
|--|-----------------------------|-----------------------------|--|---|---|-----------|----------------------------------|
|  | Total                       | Farmers and<br>Stockraisers |  |   |   |           |                                  |
| 7.9                                    | 9.7                         | 5.7                         | 0.3  | 0.2   | 35.9  | 5.0       | 2.5                              |
| 1.9                                    | 6.1                         | 0.3                         | 0.0  | —   | 9.2   | 1.1       | 1.4                              |
| 6.2                                    | 8.7                         | 4.2                         | 0.2  | 0.2   | 28.5  | 3.9       | 2.2                              |
| 6.9                                    | 26.8                        | 17.8                        | 0.7  | 0.3   | 28.0  | 4.9       | 1.9                              |
| 2.1                                    | 9.0                         | 0.7                         | 0.0  | —   | 8.5   | 1.3       | 1.7                              |
| 5.6                                    | 22.2                        | 13.4                        | 0.5  | 0.3   | 23.0  | 4.0       | 1.9                              |
| 7.6                                    | 14.2                        | 8.9                         | 0.4  | 0.2   | 33.8  | 5.0       | 2.3                              |
| 2.0                                    | 6.8                         | 0.4                         | 0.0  | —   | 9.0   | 1.1       | 1.5                              |
| 6.1                                    | 12.2                        | 6.6                         | 0.3  | 0.2   | 27.0  | 3.9       | 2.1                              |
| 7.0                                    | 16.6                        | 11.9                        | 0.2  | 0.3   | 32.7  | 6.0       | 2.2                              |
| 2.4                                    | 6.5                         | 0.7                         | 0.0  | —   | 4.8   | 1.5       | 1.6                              |
| 5.8                                    | 14.1                        | 9.2                         | 0.1  | 0.3   | 25.8  | 4.9       | 2.0                              |
| 7.4                                    | 14.8                        | 9.6                         | 0.3  | 0.3   | 33.6  | 5.2       | 2.3                              |
| 2.1                                    | 6.8                         | 0.5                         | 0.0  | —   | 8.1   | 1.2       | 1.5                              |
| 6.0                                    | 12.6                        | 7.1                         | 0.3  | 0.2   | 26.7  | 4.1       | 2.1                              |

# LABOUR FORCE, EARNINGS AND INCOME

## LABOUR FORCE<sup>(1)</sup> BY INDUSTRY AND SEX, SELECTED CENTRES, LAKE ST. CLAIR REGION, 1961

|  | Windsor           |        |        |        |        |        | Chatham |        |        |         |        |        |
|--|-------------------|--------|--------|--------|--------|--------|---------|--------|--------|---------|--------|--------|
|  | Metropolitan Area |        |        | City   |        |        | Sarnia  |        |        | Chatham |        |        |
|  | Male              | Female | Total  | Male   | Female | Total  | Male    | Female | Total  | Male    | Female | Total  |
| All Industries.....                            | 49,166            | 19,493 | 68,659 | 29,247 | 13,140 | 42,387 | 13,349  | 5,165  | 18,514 | 7,698   | 3,578  | 11,276 |
| Agriculture.....                               | 803               | 102    | 905    | 149    | 24     | 173    | 51      | 7      | 58     | 166     | 36     | 202    |
| Forestry.....                                  | 5                 | —      | 5      | 3      | —      | 3      | 3       | —      | 3      | 3       | —      | 3      |
| Fishing and Trapping.....                      | 11                | 1      | 12     | 4      | —      | 4      | 1       | —      | 1      | 1       | —      | 1      |
| Mines <sup>(2)</sup> , Quarries, Oil Wells.... | 289               | 14     | 303    | 169    | 13     | 182    | 50      | 2      | 52     | 39      | 2      | 41     |
| Manufacturing Industries.....                  | 21,173            | 3,429  | 24,602 | 12,199 | 2,353  | 14,552 | 5,936   | 731    | 6,667  | 2,489   | 416    | 2,905  |
| Foods and Beverages.....                       | 2,519             | 848    | 3,367  | 1,435  | 604    | 2,039  | 190     | 35     | 225    | 692     | 159    | 851    |
| Tobacco Products.....                          | 4                 | 2      | 6      | 2      | 2      | 4      | —       | —      | —      | 72      | 36     | 108    |
| Rubber.....                                    | 30                | 17     | 47     | 17     | 6      | 23     | 3       | —      | 3      | 2       | —      | 2      |
| Leather.....                                   | 7                 | 3      | 10     | 3      | 1      | 4      | —       | 1      | 1      | 2       | —      | 2      |
| Textile.....                                   | 54                | 81     | 135    | 30     | 53     | 83     | 4       | 2      | 6      | 18      | 18     | 36     |
| Knitting Mills.....                            | 4                 | 1      | 5      | 3      | 1      | 4      | —       | —      | —      | 1       | —      | 1      |
| Clothing.....                                  | 107               | 225    | 332    | 80     | 183    | 263    | 7       | 4      | 11     | 9       | 23     | 32     |
| Wood.....                                      | 186               | 28     | 214    | 110    | 15     | 125    | 8       | 2      | 10     | 12      | 3      | 15     |
| Furniture and Fixtures.....                    | 127               | 27     | 154    | 81     | 17     | 98     | 20      | 3      | 23     | 4       | —      | 4      |
| Paper and Allied Industries...                 | 59                | 21     | 80     | 34     | 10     | 44     | 2       | —      | 2      | 4       | 1      | 5      |
| Print., Publ. & Allied Ind.....                | 780               | 214    | 994    | 449    | 159    | 608    | 142     | 47     | 189    | 120     | 41     | 161    |
| Primary Metals.....                            | 430               | 28     | 458    | 293    | 23     | 316    | 189     | 4      | 193    | 61      | 4      | 65     |
| Metal Fabricating <sup>(3)</sup> .....         | 2,966             | 254    | 3,220  | 1,819  | 170    | 1,989  | 327     | 50     | 377    | 204     | 20     | 224    |
| Machinery <sup>(4)</sup> .....                 | 632               | 159    | 791    | 356    | 113    | 469    | 15      | 2      | 17     | 128     | 13     | 141    |
| Transportation Equipment....                   | 11,768            | 1,068  | 12,836 | 6,705  | 695    | 7,400  | 223     | 120    | 343    | 925     | 64     | 989    |
| Electrical Products.....                       | 152               | 32     | 184    | 82     | 23     | 105    | 8       | 5      | 13     | 10      | 2      | 12     |
| Non-Metallic Mineral Products                  | 280               | 23     | 303    | 164    | 13     | 177    | 341     | 21     | 362    | 69      | 3      | 72     |
| Petroleum and Coal Products.                   | 26                | —      | 26     | 14     | —      | 14     | 1,746   | 124    | 1,870  | 9       | —      | 9      |



# LABOUR FORCE, EARNINGS AND INCOME

|   |       |       |        |       |       |        |       |       |       |       |       |       |
|---|-------|-------|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| Chem. & Chem. Prods.....                                    | 539   | 259   | 793    | 271   | 170   | 441    | 2,685 | 306   | 2,991 | 97    | 20    | 117   |
| Miscellaneous Manufacturing.                                | 503   | 139   | 642    | 251   | 95    | 346    | 26    | 5     | 31    | 50    | 9     | 59    |
| Construction Industry.....                                  | 3,891 | 156   | 4,047  | 2,472 | 100   | 2,572  | 1,701 | 52    | 1,753 | 668   | 20    | 688   |
| Transportation, Communication<br>and Other Utilities.....   | 4,589 | 756   | 5,345  | 2,690 | 491   | 3,181  | 1,385 | 191   | 1,576 | 1,063 | 214   | 1,277 |
| Trade.....  | 7,376 | 3,458 | 10,834 | 4,321 | 2,300 | 6,621  | 1,715 | 1,009 | 2,724 | 1,563 | 689   | 2,252 |
| Wholesale Trade.....  | 2,024 | 477   | 2,501  | 1,073 | 320   | 1,393  | 383   | 60    | 443   | 504   | 90    | 594   |
| Retail Trade.....   | 5,352 | 2,981 | 8,333  | 3,248 | 1,980 | 5,228  | 1,332 | 949   | 2,281 | 1,059 | 599   | 1,658 |
| Finance, Insurance and Real Estate                          | 1,242 | 1,448 | 2,690  | 684   | 912   | 1,596  | 344   | 236   | 580   | 234   | 155   | 389   |
| Community, Business and<br>Personal Service Industries..... | 6,139 | 9,212 | 15,351 | 4,179 | 6,316 | 10,495 | 1,279 | 2,652 | 3,931 | 884   | 1,861 | 2,745 |
| Public Administration and Defence                           | 2,359 | 616   | 2,975  | 1,485 | 421   | 1,906  | 585   | 198   | 783   | 403   | 135   | 538   |
| Industry Unspecified or Undefined                           | 1,289 | 301   | 1,590  | 892   | 210   | 1,102  | 299   | 87    | 386   | 185   | 50    | 235   |

(1) Excludes a few persons seeking work who have never been employed.

(2) Includes milling.

(3) Excludes machinery and transportation equipment industries.

(4) Excludes electrical machinery industries.

Note: 1961 Labour Force, 15 years of age and over.

# LABOUR FORCE, EARNINGS AND INCOME

## INDEX NUMBERS OF EMPLOYMENT, ALL INDUSTRIES, SARNIA AND WINDSOR URBAN AREAS, 1954 TO 1965

|                | Average | Jan.  | Feb.  | Mar.  | Apr.  | May   | June       | July  | Aug.  | Sept. | Oct.  | Nov.  | Dec.  |
|----------------|---------|-------|-------|-------|-------|-------|------------|-------|-------|-------|-------|-------|-------|
|                |         |       |       |       |       |       | 1949 = 100 |       |       |       |       |       |       |
| <b>Sarnia</b>  |         |       |       |       |       |       |            |       |       |       |       |       |       |
| 1954.....      | 117.4   | 116.4 | 114.6 | 115.8 | 122.3 | 122.4 | 123.0      | 123.7 | 116.3 | 114.2 | 114.5 | 114.5 | 111.5 |
| 1955.....      | 121.4   | 110.7 | 113.1 | 112.8 | 118.4 | 122.5 | 123.1      | 125.1 | 126.1 | 126.8 | 127.5 | 126.0 | 124.1 |
| 1956.....      | 134.7   | 123.0 | 124.6 | 128.4 | 134.2 | 139.3 | 139.6      | 142.7 | 137.7 | 140.5 | 139.8 | 139.4 | 127.1 |
| 1957.....      | 139.2   | 129.3 | 130.0 | 137.3 | 144.9 | 138.7 | 144.1      | 144.5 | 145.5 | 143.4 | 139.2 | 139.1 | 134.0 |
| 1958.....      | 129.9   | 131.7 | 132.7 | 134.3 | 135.7 | 134.5 | 134.7      | 130.5 | 130.1 | 120.6 | 124.8 | 124.9 | 124.0 |
| 1959.....      | 119.5   | 121.2 | 121.1 | 102.2 | 107.3 | 107.4 | 114.1      | 127.9 | 128.2 | 126.8 | 128.3 | 126.0 | 123.2 |
| 1960.....      | 124.7   | 120.7 | 120.5 | 120.5 | 125.9 | 126.1 | 128.9      | 128.1 | 129.4 | 126.9 | 125.1 | 122.9 | 121.9 |
| 1961.....      | 126.5   | 119.1 | 118.2 | 121.1 | 123.0 | 126.2 | 128.6      | 135.2 | 134.9 | 131.8 | 129.0 | 127.0 | 124.5 |
| 1962.....      | 128.9   | 122.9 | 124.5 | 126.4 | 130.3 | 134.9 | 132.1      | 136.6 | 129.5 | 127.5 | 129.5 | 125.3 | 126.9 |
| 1963.....      | 133.3   | 125.7 | 125.2 | 127.5 | 130.4 | 136.2 | 137.7      | 135.8 | 139.3 | 135.0 | 137.2 | 137.1 | 132.6 |
| 1964.....      | 135.7   | 131.6 | 128.7 | 131.4 | 132.1 | 136.4 | 138.0      | 137.5 | 135.1 | 138.2 | 140.8 | 142.4 | 136.0 |
| 1965.....      | 141.8   | 134.7 | 133.7 | 137.3 | 135.7 | 138.6 | 144.4      | 143.4 | 146.4 | 146.2 | 146.4 | 149.7 | 145.4 |
| <b>Windsor</b> |         |       |       |       |       |       |            |       |       |       |       |       |       |
| 1954.....      | 91.5    | 106.8 | 106.3 | 104.2 | 101.4 | 96.9  | 97.1       | 89.5  | 80.9  | 83.0  | 74.6  | 77.4  | 79.6  |
| 1955.....      | 103.4   | 81.2  | 100.4 | 103.7 | 105.5 | 107.4 | 110.5      | 106.4 | 92.5  | 105.6 | 109.7 | 110.2 | 108.1 |
| 1956.....      | 104.9   | 105.6 | 107.9 | 109.2 | 109.9 | 106.7 | 107.9      | 107.7 | 87.1  | 96.2  | 105.9 | 107.4 | 107.2 |
| 1957.....      | 95.9    | 105.8 | 103.1 | 101.9 | 100.7 | 102.4 | 98.2       | 97.0  | 85.1  | 87.2  | 91.3  | 92.3  | 86.1  |
| 1958.....      | 78.6    | 74.2  | 80.9  | 81.2  | 80.3  | 80.7  | 82.1       | 78.0  | 67.2  | 80.6  | 78.2  | 81.3  | 79.1  |
| 1959.....      | 79.3    | 72.6  | 78.4  | 79.1  | 80.7  | 82.1  | 84.6       | 78.9  | 74.5  | 80.9  | 82.0  | 78.1  | 79.2  |
| 1960.....      | 76.2    | 79.1  | 78.9  | 78.2  | 77.9  | 79.1  | 79.4       | 65.5  | 75.3  | 76.4  | 75.4  | 74.5  | 74.3  |
| 1961.....      | 72.8    | 71.6  | 72.3  | 72.6  | 72.7  | 74.4  | 74.6       | 68.1  | 73.4  | 74.1  | 73.5  | 74.0  | 72.9  |
| 1962.....      | 72.1    | 71.0  | 64.0  | 64.0  | 73.1  | 74.4  | 74.1       | 70.2  | 75.0  | 75.1  | 74.7  | 75.4  | 73.9  |
| 1963.....      | 77.3    | 73.2  | 73.2  | 73.9  | 76.0  | 77.7  | 79.4       | 65.4  | 79.8  | 81.9  | 82.0  | 82.8  | 81.8  |
| 1964.....      | 86.1    | 81.8  | 81.7  | 81.9  | 83.7  | 85.4  | 86.8       | 76.2  | 89.1  | 91.2  | 91.9  | 92.8  | 91.2  |
| 1965.....      | 97.6    | 91.7  | 75.3  | 91.8  | 98.2  | 99.3  | 101.7      | 92.6  | 100.1 | 103.6 | 104.6 | 106.3 | 105.7 |

LABOUR FORCE, EARNINGS AND INCOME

AVERAGE WEEKLY WAGES AND SALARIES, ALL INDUSTRIES,  
SARNIA AND WINDSOR URBAN AREAS, 1954 TO 1965

|                | Average | Jan.   | Feb.   | Mar.   | Apr.   | May    | June    | July   | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   |
|----------------|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|
|                |         |        |        |        |        |        | Dollars |        |        |        |        |        |        |
| <b>Sarnia</b>  |         |        |        |        |        |        |         |        |        |        |        |        |        |
| 1954.....      | 73.41   | 71.83  | 71.88  | 72.15  | 74.45  | 71.63  | 75.67   | 75.25  | 73.49  | 73.17  | 74.16  | 74.44  | 72.83  |
| 1955.....      | 74.66   | 73.11  | 73.86  | 73.98  | 74.10  | 73.98  | 75.97   | 77.62  | 74.14  | 75.51  | 76.36  | 75.08  | 72.25  |
| 1956.....      | 80.08   | 74.73  | 78.07  | 77.22  | 79.01  | 80.80  | 82.00   | 84.64  | 82.69  | 82.21  | 80.75  | 80.96  | 77.94  |
| 1957.....      | 85.72   | 81.08  | 79.83  | 84.22  | 84.77  | 84.75  | 87.67   | 87.65  | 87.67  | 90.11  | 86.06  | 89.57  | 85.25  |
| 1958.....      | 91.15   | 89.75  | 88.86  | 91.50  | 91.65  | 93.13  | 92.13   | 90.42  | 94.70  | 89.67  | 90.67  | 91.80  | 89.51  |
| 1959.....      | 93.99   | 94.56  | 93.25  | 93.29  | 94.91  | 95.63  | 90.49   | 94.13  | 92.60  | 94.31  | 95.78  | 96.00  | 92.98  |
| 1960.....      | 98.05   | 94.64  | 95.67  | 97.20  | 101.79 | 95.91  | 97.83   | 97.84  | 98.05  | 99.61  | 100.31 | 99.37  | 98.37  |
| 1961.....      | 101.28  | 99.95  | 101.24 | 102.87 | 100.26 | 101.49 | 101.23  | 101.00 | 101.81 | 101.89 | 101.74 | 101.54 | 100.37 |
| 1962.....      | 104.28  | 103.84 | 103.93 | 103.46 | 104.64 | 104.32 | 103.95  | 104.91 | 103.83 | 104.35 | 105.23 | 106.26 | 102.62 |
| 1963.....      | 107.72  | 107.06 | 106.21 | 106.31 | 108.95 | 107.94 | 110.54  | 109.16 | 106.73 | 108.28 | 108.41 | 109.15 | 103.84 |
| 1964.....      | 111.09  | 109.58 | 108.49 | 108.91 | 110.53 | 110.00 | 108.79  | 110.65 | 114.38 | 110.71 | 116.70 | 114.39 | 109.92 |
| 1965.....      | 115.90  | 113.65 | 110.17 | 115.59 | 112.93 | 111.79 | 117.96  | 116.24 | 118.66 | 122.97 | 116.94 | 117.33 | 116.57 |
| <b>Windsor</b> |         |        |        |        |        |        |         |        |        |        |        |        |        |
| 1954.....      | 68.26   | 68.29  | 68.38  | 68.29  | 68.93  | 65.70  | 67.78   | 67.64  | 67.63  | 68.16  | 69.56  | 69.55  | 69.15  |
| 1955.....      | 71.23   | 70.27  | 72.41  | 74.11  | 78.20  | 75.68  | 67.11   | 67.97  | 72.26  | 73.10  | 70.07  | 72.01  | 61.54  |
| 1956.....      | 71.33   | 72.34  | 72.39  | 72.68  | 72.34  | 65.96  | 71.92   | 71.03  | 71.53  | 73.55  | 69.58  | 74.67  | 68.02  |
| 1957.....      | 73.58   | 73.53  | 72.57  | 74.22  | 73.84  | 70.26  | 75.10   | 74.20  | 74.38  | 75.03  | 76.31  | 75.76  | 67.82  |
| 1958.....      | 77.04   | 74.03  | 73.87  | 77.43  | 78.22  | 78.98  | 77.96   | 77.99  | 77.48  | 76.69  | 78.58  | 79.84  | 73.37  |
| 1959.....      | 83.30   | 80.24  | 82.77  | 82.35  | 82.95  | 84.89  | 84.91   | 83.88  | 83.40  | 87.97  | 86.65  | 80.01  | 79.58  |
| 1960.....      | 84.98   | 82.77  | 85.06  | 86.23  | 86.74  | 87.39  | 86.48   | 83.97  | 84.00  | 84.42  | 85.04  | 84.17  | 83.51  |
| 1961.....      | 87.29   | 83.87  | 86.09  | 87.32  | 87.17  | 88.16  | 89.02   | 86.52  | 86.95  | 88.58  | 88.25  | 88.27  | 87.29  |
| 1962.....      | 90.44   | 88.75  | 88.03  | 89.16  | 90.03  | 92.24  | 92.12   | 89.49  | 90.09  | 89.95  | 92.87  | 95.18  | 87.39  |
| 1963.....      | 94.98   | 91.06  | 90.54  | 93.81  | 96.52  | 96.36  | 93.46   | 92.09  | 92.77  | 94.79  | 98.97  | 101.73 | 97.61  |
| 1964.....      | 100.97  | 98.32  | 96.40  | 96.99  | 101.10 | 103.11 | 101.10  | 102.27 | 104.45 | 107.97 | 107.41 | 99.14  | 93.40  |
| 1965.....      | 107.49  | 92.25  | 92.97  | 114.76 | 113.10 | 109.62 | 111.76  | 103.84 | 105.58 | 114.09 | 111.09 | 111.37 | 109.49 |

LABOUR FORCE, EARNINGS AND INCOME

INDEX NUMBERS OF EMPLOYMENT IN MANUFACTURING,  
LAKE ST. CLAIR REGION, 1949 TO 1965

| Year      | Average | Jan.  | Feb.  | Mar.  | Apr.  | May   | June     | July  | Aug.  | Sept. | Oct.  | Nov.  | Dec.  |
|-----------|---------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|-------|
|           |         |       |       |       |       |       | 1949=100 |       |       |       |       |       |       |
| 1949..... |         |       |       |       |       |       | 94.8     |       |       |       |       |       |       |
| 1950..... |         |       |       |       |       |       | 103.3    |       |       |       |       |       |       |
| 1951..... |         |       |       |       |       |       | 111.7    |       |       |       |       |       |       |
| 1952..... |         |       |       |       |       |       | 102.3    |       |       |       |       |       |       |
| 1953..... |         |       |       |       |       |       | n.a.     |       |       |       |       |       |       |
| 1954..... |         |       |       |       |       |       | n.a.     |       |       |       |       |       |       |
| 1955..... | 103.5   | 83.4  | 100.9 | 103.2 | 102.7 | 104.1 | 108.4    | 106.5 | 98.7  | 109.4 | 109.4 | 109.2 | 81.7  |
| 1956..... | 105.1   | 107.4 | 108.9 | 108.8 | 108.5 | 105.7 | 105.7    | 105.2 | 90.0  | 102.1 | 105.3 | 108.4 | 106.6 |
| 1957..... | 97.1    | 106.8 | 104.1 | 101.1 | 100.8 | 102.1 | 99.2     | 97.4  | 89.8  | 93.9  | 92.3  | 92.1  | 105.0 |
| 1958..... | 85.2    | 78.7  | 111.2 | 85.3  | 83.8  | 81.8  | 83.1     | 80.1  | 76.8  | 90.2  | 82.6  | 85.2  | 85.2  |
| 1959..... | 83.3    | 79.2  | 84.7  | 80.9  | 80.4  | 81.3  | 84.4     | 81.5  | 86.1  | 88.3  | 85.5  | 82.7  | 84.0  |
| 1960..... | 81.1    | 84.5  | 83.8  | 80.9  | 80.0  | 81.6  | 81.8     | 70.0  | 85.7  | 86.2  | 79.0  | 80.7  | 84.9  |
| 1961..... | 77.2    | 78.1  | 77.2  | 73.9  | 73.3  | 75.8  | 75.7     | 71.8  | 81.2  | 85.5  | 78.4  | 80.7  | 79.3  |
| 1962..... | 78.2    | 76.8  | 71.7  | 71.7  | 78.2  | 79.3  | 77.9     | 75.4  | 84.9  | 84.5  | 79.6  | 80.9  | 77.8  |
| 1963..... | 82.6    | 79.7  | 80.4  | 80.6  | 82.1  | 82.2  | 83.9     | 71.1  | 87.6  | 89.6  | 84.5  | 85.6  | 84.2  |
| 1964..... | 90.4    | 86.1  | 85.3  | 85.5  | 86.8  | 88.0  | 89.7     | 81.3  | 97.0  | 99.5  | 94.7  | 96.6  | 94.6  |
| 1965..... | 101.2   | 95.8  | 81.3  | 94.4  | 99.5  | 101.1 | 103.3    | 95.0  | 111.1 | 111.7 | 105.9 | 108.8 | 106.2 |

n. a. Not available.

AVERAGE WEEKLY WAGES AND SALARIES IN MANUFACTURING,  
LAKE ST. CLAIR REGION, 1949 TO 1965

| Year      | Average | Jan.   | Feb.   | Mar.   | Apr.   | May    | June    | July   | Aug.   | Sept.  | Oct.   | Nov.   | Dec.   |
|-----------|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|
|           |         |        |        |        |        |        | Dollars |        |        |        |        |        |        |
| 1949..... |         |        |        |        |        |        | 48.85   |        |        |        |        |        |        |
| 1950..... |         |        |        |        |        |        | 54.48   |        |        |        |        |        |        |
| 1951..... |         |        |        |        |        |        | 60.29   |        |        |        |        |        |        |
| 1952..... |         |        |        |        |        |        | 58.67   |        |        |        |        |        |        |
| 1953..... |         |        |        |        |        |        | n.a.    |        |        |        |        |        |        |
| 1954..... |         |        |        |        |        |        | n.a.    |        |        |        |        |        |        |
| 1955..... | 73.47   | 72.45  | 73.97  | 75.51  | 80.05  | 77.89  | 70.40   | 70.86  | 73.66  | 74.27  | 72.58  | 74.40  | 71.44  |
| 1956..... | 74.88   | 74.36  | 75.00  | 75.85  | 76.06  | 70.76  | 76.05   | 75.06  | 75.64  | 76.41  | 73.40  | 77.89  | 65.58  |
| 1957..... | 78.69   | 77.21  | 76.10  | 79.00  | 78.68  | 76.01  | 80.58   | 79.42  | 79.41  | 79.02  | 81.62  | 81.93  | 72.13  |
| 1958..... | 84.46   | 80.20  | 96.27  | 83.28  | 83.55  | 85.26  | 84.88   | 84.42  | 82.38  | 82.64  | 84.83  | 86.27  | 75.34  |
| 1959..... | 88.48   | 86.15  | 88.02  | 87.75  | 88.91  | 90.68  | 89.83   | 90.12  | 86.90  | 90.57  | 91.34  | 86.58  | 79.57  |
| 1960..... | 90.52   | 87.53  | 90.39  | 92.34  | 92.78  | 92.87  | 92.93   | 91.78  | 87.15  | 88.70  | 92.00  | 89.46  | 84.86  |
| 1961..... | 93.86   | 89.71  | 92.37  | 95.12  | 95.22  | 95.89  | 96.56   | 93.78  | 90.87  | 92.75  | 95.12  | 94.99  | 88.31  |
| 1962..... | 97.68   | 96.09  | 95.71  | 96.80  | 97.88  | 99.30  | 99.78   | 98.14  | 95.17  | 95.76  | 100.12 | 101.92 | 93.98  |
| 1963..... | 102.89  | 98.83  | 98.44  | 101.36 | 104.46 | 104.57 | 102.46  | 103.28 | 98.96  | 101.14 | 106.87 | 109.66 | 95.54  |
| 1964..... | 108.05  | 106.24 | 104.40 | 105.92 | 109.61 | 110.71 | 108.86  | 109.82 | 108.31 | 111.59 | 113.65 | 106.28 | 104.68 |
| 1965..... | 113.42  | 100.94 | 102.07 | 121.08 | 119.34 | 115.79 | 117.44  | 110.03 | 108.34 | 116.20 | 116.27 | 117.29 | 101.22 |
|           |         |        |        |        |        |        |         |        |        |        |        |        | 116.22 |



LABOUR FORCE, EARNINGS AND INCOME

WAGE AND SALARY EARNERS, GROUPED BY EARNINGS DURING THE 12 MONTHS PRIOR TO JUNE 1, 1961,  
COUNTIES, LAKE ST. CLAIR REGION

|                    |     | Total<br>Wage<br>Earners | Under<br>\$1,000 | \$1,000<br>1,999 | \$2,000<br>2,999 | \$3,000<br>3,999 | \$4,000<br>5,999 | \$6,000<br>And Over | Not<br>Stated |
|--------------------|-----|--------------------------|------------------|------------------|------------------|------------------|------------------|---------------------|---------------|
| <b>A—Border</b>    |     |                          |                  |                  |                  |                  |                  |                     |               |
| Essex.....         | No. | 78,552                   | 11,375           | 9,085            | 10,644           | 14,281           | 21,884           | 7,393               | 3,890         |
|                    | %   | (100.0)                  | (14.5)           | (11.6)           | (13.6)           | (18.2)           | (27.7)           | (9.4)               | (5.0)         |
| Kent.....          | No. | 23,441                   | 4,551            | 3,657            | 3,792            | 4,588            | 4,624            | 1,312               | 917           |
|                    | %   | (100.0)                  | (19.4)           | (15.6)           | (16.2)           | (19.6)           | (19.7)           | (5.6)               | (3.9)         |
| Sub-total.....     | No. | 101,993                  | 15,926           | 12,742           | 14,436           | 18,869           | 26,508           | 8,705               | 4,807         |
|                    | %   | (100.0)                  | (15.6)           | (12.5)           | (14.2)           | (18.5)           | (26.0)           | (8.5)               | (4.7)         |
| <b>B—Lambton</b>   |     |                          |                  |                  |                  |                  |                  |                     |               |
| Lambton.....       | No. | 29,104                   | 4,473            | 3,591            | 3,876            | 4,035            | 7,843            | 4,299               | 987           |
|                    | %   | (100.0)                  | (15.4)           | (12.3)           | (13.3)           | (13.9)           | (26.9)           | (14.8)              | (3.4)         |
| Total, Region..... | No. | 131,097                  | 20,399           | 16,333           | 18,312           | 22,904           | 34,351           | 13,004              | 5,794         |
|                    | %   | (100.0)                  | (15.6)           | (12.4)           | (14.0)           | (17.5)           | (26.2)           | (9.9)               | (4.4)         |

Note : Due to rounding percentages may not add to 100.0

LABOUR INCOME OF THE LAKE ST. CLAIR REGION,  
COUNTIES, 1957 TO 1964

|                             | 1957                         | 1958           | 1959           | 1960           | 1961           | 1962           | 1963           | 1964           |
|-----------------------------|------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                             | --- thousands of dollars --- |                |                |                |                |                |                |                |
| <b>A—Border</b>             |                              |                |                |                |                |                |                |                |
| Essex.....                  | 266,434                      | 255,934        | 274,995        | 287,328        | 282,358        | 296,442        | 335,414        | 388,031        |
| Kent.....                   | 58,679                       | 62,805         | 69,791         | 72,428         | 68,761         | 78,932         | 86,922         | 87,649         |
| Sub-total.....              | 325,113                      | 318,739        | 344,786        | 359,756        | 351,119        | 375,374        | 422,336        | 475,680        |
| <b>B—Lambton</b>            |                              |                |                |                |                |                |                |                |
| Lambton.....                | 91,663                       | 98,300         | 100,991        | 112,096        | 110,701        | 119,646        | 119,683        | 127,605        |
| <b>Total, Region.....</b>   | <b>416,776</b>               | <b>417,039</b> | <b>445,777</b> | <b>471,852</b> | <b>461,820</b> | <b>495,020</b> | <b>542,019</b> | <b>603,285</b> |
| Total, Ontario.....         | 6,287,152                    | 6,602,979      | 6,991,020      | 7,408,189      | 7,751,686      | 8,145,201      | 8,717,216      | 9,660,168      |
| Region as % of Ontario..... | 6.6                          | 6.3            | 6.4            | 6.4            | 6.0            | 6.1            | 6.2            | 6.2            |

DISTRIBUTION OF LABOUR INCOME, COUNTIES,  
LAKE ST. CLAIR REGION, 1957 TO 1964

|                           | 1957         | 1958         | 1959         | 1960         | 1961         | 1962         | 1963         | 1964         |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                           | --- % ---    |              |              |              |              |              |              |              |
| <b>A—Border</b>           |              |              |              |              |              |              |              |              |
| Essex.....                | 63.9         | 61.4         | 61.7         | 60.9         | 61.1         | 59.9         | 61.9         | 64.3         |
| Kent.....                 | 14.1         | 15.0         | 15.6         | 15.3         | 14.9         | 15.9         | 16.0         | 14.5         |
| Sub-total.....            | 78.0         | 76.4         | 77.3         | 76.2         | 76.0         | 75.8         | 77.9         | 78.8         |
| <b>B—Lambton</b>          |              |              |              |              |              |              |              |              |
| Lambton.....              | 22.0         | 23.6         | 22.7         | 23.8         | 24.0         | 24.2         | 22.1         | 21.2         |
| <b>Total, Region.....</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |

LABOUR INCOME PER CAPITA OF LABOUR INCOME RECIPIENTS, COUNTIES,  
LAKE ST. CLAIR REGION, 1957 TO 1964

|                           | 1957         | 1958         | 1959         | 1960         | 1961         | 1962         | 1963         | 1964         |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                           | -----\$----- |              |              |              |              |              |              |              |
| <b>A—Border</b>           |              |              |              |              |              |              |              |              |
| Essex.....                | 2,896        | 3,014        | 3,182        | 3,322        | 3,340        | 3,483        | 3,812        | 4,151        |
| Kent.....                 | 2,235        | 2,375        | 2,507        | 2,549        | 2,415        | 2,668        | 2,834        | 2,865        |
| Sub-total.....            | 2,750        | 2,862        | 3,017        | 3,131        | 3,107        | 3,273        | 3,559        | 3,834        |
| <b>B—Lambton</b>          |              |              |              |              |              |              |              |              |
| Lambton.....              | 3,114        | 3,192        | 3,236        | 3,461        | 3,578        | 3,636        | 3,742        | 3,842        |
| <b>Total, Region.....</b> | <b>2,822</b> | <b>2,934</b> | <b>3,064</b> | <b>3,204</b> | <b>3,208</b> | <b>3,354</b> | <b>3,598</b> | <b>3,836</b> |
| Total, Ontario.....       | 2,915        | 3,096        | 3,197        | 3,309        | 3,428        | 3,529        | 3,678        | 3,906        |

# INCOME DISTRIBUTION, COUNTIES, LAKE ST. CLAIR REGION, 1960 TO 1963

| Income Class<br>\$       | 1960   |        |         |         |           | 1961   |        |         |         |           |
|--------------------------|--------|--------|---------|---------|-----------|--------|--------|---------|---------|-----------|
|                          | Essex  | Kent   | Lambton | Total   |           | Essex  | Kent   | Lambton | Total   |           |
|                          |        |        |         | Region  | Ontario   |        |        |         | Region  | Ontario   |
| no. of income recipients |        |        |         |         |           |        |        |         |         |           |
| under 1,999              | 24,858 | 10,202 | 9,260   | 44,320  | 609,681   | 25,439 | 10,632 | 8,791   | 44,862  | 610,492   |
| 2,000-2,999              | 15,708 | 5,408  | 5,238   | 26,354  | 446,628   | 14,501 | 5,979  | 5,181   | 25,661  | 435,794   |
| 3,000-3,999              | 15,064 | 5,466  | 4,770   | 25,300  | 439,814   | 13,368 | 5,187  | 4,496   | 23,051  | 422,944   |
| 4,000-4,999              | 16,158 | 3,875  | 4,927   | 24,960  | 358,911   | 16,225 | 3,528  | 4,207   | 23,960  | 369,940   |
| 5,000-5,999              | 8,354  | 2,095  | 3,893   | 14,342  | 205,099   | 8,660  | 2,077  | 3,613   | 14,350  | 221,542   |
| 6,000-9,999              | 8,229  | 1,972  | 4,790   | 14,991  | 208,399   | 8,413  | 1,734  | 5,251   | 15,398  | 237,793   |
| 10,000 and over          | 1,744  | 592    | 867     | 3,203   | 64,434    | 2,097  | 737    | 925     | 3,759   | 73,897    |
| Total . . . . .          | 90,115 | 29,610 | 33,745  | 153,470 | 2,332,966 | 88,703 | 29,874 | 32,464  | 151,041 | 2,372,402 |
| 1962                     |        |        |         |         |           |        |        |         |         |           |
| under 1,999              | 24,819 | 9,379  | 8,518   | 42,716  | 583,586   | 24,701 | 9,837  | 8,545   | 43,083  | 611,901   |
| 2,000-2,999              | 13,544 | 5,994  | 5,732   | 25,270  | 427,322   | 14,405 | 5,966  | 5,685   | 26,056  | 426,850   |
| 3,000-3,999              | 13,141 | 5,431  | 4,544   | 23,116  | 428,763   | 11,913 | 5,439  | 4,710   | 22,062  | 421,890   |
| 4,000-4,999              | 15,784 | 4,574  | 4,867   | 25,225  | 368,659   | 13,631 | 3,953  | 4,121   | 21,705  | 376,197   |
| 5,000-5,999              | 9,352  | 2,581  | 3,695   | 15,628  | 249,030   | 12,500 | 3,264  | 3,341   | 19,105  | 270,621   |
| 6,000-9,999              | 10,027 | 2,249  | 6,121   | 18,397  | 280,955   | 13,379 | 3,183  | 6,218   | 22,780  | 313,026   |
| 10,000 and over          | 2,627  | 839    | 1,049   | 4,515   | 83,245    | 2,765  | 879    | 1,296   | 4,940   | 92,357    |
| Total . . . . .          | 89,294 | 31,047 | 34,526  | 154,867 | 2,421,560 | 93,294 | 32,521 | 33,916  | 159,731 | 2,512,842 |

LABOUR FORCE, EARNINGS AND INCOME

## 1960

1963



**MONTHLY AND ANNUAL AVERAGE WEATHER DATA,  
EXPERIMENTAL FARM, HARROW, ESSEX COUNTY, 1918 - 1954**

| Month                | Mean    | Mean         | Mean    | Rain    | Snow             | Total*  | Sunshine |
|----------------------|---------|--------------|---------|---------|------------------|---------|----------|
|                      | Maximum | Minimum      |         |         |                  |         | Hours    |
|                      | Average | Average      |         |         |                  |         | Average  |
|                      | — — — — | — F° — — — — | — — — — | — — — — | — inches — — — — | — — — — |          |
| January.....         | 32.5    | 19.0         | 25.8    | 1.14    | 9.8              | 2.12    | 76.6     |
| February.....        | 35.0    | 20.1         | 27.6    | 1.21    | 8.3              | 2.04    | 93.3     |
| March.....           | 43.4    | 27.3         | 35.3    | 1.96    | 4.7              | 2.43    | 123.4    |
| April.....           | 55.7    | 36.0         | 45.8    | 2.50    | 1.4              | 2.64    | 162.8    |
| May.....             | 68.1    | 46.6         | 57.3    | 2.41    | 0.1              | 2.42    | 237.0    |
| June.....            | 79.1    | 57.9         | 68.5    | 2.96    | —                | 2.96    | 253.3    |
| July.....            | 83.5    | 62.3         | 72.9    | 2.13    | —                | 2.13    | 293.4    |
| August.....          | 81.5    | 60.0         | 70.7    | 2.28    | —                | 2.28    | 265.5    |
| September.....       | 71.4    | 54.0         | 64.2    | 2.40    | —                | 2.40    | 196.6    |
| October.....         | 62.6    | 43.6         | 53.1    | 2.05    | 0.1              | 2.06    | 158.6    |
| November.....        | 47.0    | 33.2         | 39.8    | 1.57    | 3.2              | 1.89    | 89.1     |
| December.....        | 35.2    | 23.2         | 29.3    | 1.23    | 7.8              | 2.01    | 64.1     |
| Annual Total or Mean | 57.9    | 40.3         | 49.2    | 23.84   | 35.4             | 27.38   | 2,013.7  |

\*10 inches of snow=1 inch of rain.

NUMBER AND ACREAGE OF FARMS, COUNTIES  
LAKE ST. CLAIR REGION, 1951, 1956, 1961 AND 1966

|                     | Year | Number of Farms |                 | Area of Farms |                 | Average<br>Acreage<br>Per Farm | Area of Farms<br>as % of Total<br>Land Area | Total<br>Land Area<br>Acres |
|---------------------|------|-----------------|-----------------|---------------|-----------------|--------------------------------|---|-----------------------------|
|                     |      | No.             | % of<br>Ontario | Acres         | % of<br>Ontario |                                |   |                             |
|                     |      |                 |                 |               |                 |                                |   |                             |
| <b>A—Border</b>     |      |                 |                 |               |                 |                                |   |                             |
| Essex.....          | 1951 | 5,316           | 3.5             | 375,636       | 1.8             | 70.7                           | 83.0  | 452,480                     |
|                     | 1956 | 5,312           | 3.8             | 377,144       | 1.9             | 71.0                           | 83.4  |                             |
|                     | 1961 | 4,860           | 4.0             | 379,962       | 2.0             | 78.2                           | 84.0  |                             |
|                     | 1966 | 4,482           | 4.1             | 367,501       | 2.1             | 82.0                           | 81.2  |                             |
| Kent.....           | 1951 | 5,313           | 3.5             | 553,931       | 2.7             | 104.3                          | 94.3  | 587,520                     |
|                     | 1956 | 5,125           | 3.6             | 550,592       | 2.8             | 107.4                          | 93.7  |                             |
|                     | 1961 | 4,759           | 3.9             | 557,133       | 3.0             | 117.1                          | 94.8  |                             |
|                     | 1966 | 4,187           | 3.8             | 555,313       | 3.1             | 132.6                          | 94.5  |                             |
| Sub-total.....      | 1951 | 10,629          | 7.1             | 929,567       | 4.5             | 87.5                           | 89.4  | 1,040,000                   |
|                     | 1956 | 10,437          | 7.4             | 927,736       | 4.7             | 88.9                           | 89.2  |                             |
|                     | 1961 | 9,619           | 7.9             | 937,095       | 5.0             | 97.4                           | 90.1  |                             |
|                     | 1966 | 8,669           | 7.9             | 922,814       | 5.2             | 106.4                          | 88.7  |                             |
| <b>B—Lambton</b>    |      |                 |                 |               |                 |                                |   |                             |
| Lambton.....        | 1951 | 4,646           | 3.1             | 613,215       | 2.9             | 132.0                          | 85.2  | 719,360                     |
|                     | 1956 | 4,521           | 3.2             | 605,142       | 3.0             | 133.9                          | 84.1  |                             |
|                     | 1961 | 4,206           | 3.5             | 600,850       | 3.2             | 142.9                          | 83.5  |                             |
|                     | 1966 | 4,004           | 3.6             | 596,387       | 3.3             | 148.9                          | 82.9  |                             |
| Total, Region.....  | 1951 | 15,275          | 10.2            | 1,542,782     | 7.4             | 101.0                          | 87.7  | 1,759,360                   |
|                     | 1956 | 14,958          | 10.6            | 1,532,878     | 7.7             | 102.5                          | 87.1  |                             |
|                     | 1961 | 13,825          | 11.4            | 1,537,945     | 8.3             | 111.2                          | 87.4  |                             |
|                     | 1966 | 12,673          | 11.5            | 1,519,201     | 8.5             | 119.9                          | 86.3  |                             |
| Total, Ontario..... | 1951 | 149,920         | 100.0           | 20,880,054    | 100.0           | 139.3                          | 9.0   | 232,500,480                 |
|                     | 1956 | 140,602         | 100.0           | 19,879,646    | 100.0           | 141.4                          | 8.6   |                             |
|                     | 1961 | 121,333         | 100.0           | 18,578,507    | 100.0           | 153.1                          | 8.0   |                             |
|                     | 1966 | 109,887         | 100.0           | 17,826,045    | 100.0           | 162.2                          | 7.7   |                             |

CONDITION OF FARM LAND, COUNTIES, LAKE ST. CLAIR REGION, 1951, 1961 AND 1966

|                            | Year      | Total        |         | Improved Land Total |              | Under Crops |       |              | Pasture |         | Other        |           | Unimproved Land |              |  |
|----------------------------|-----------|--------------|---------|---------------------|--------------|-------------|-------|--------------|---------|---------|--------------|-----------|-----------------|--------------|--|
|                            |           | Farm Acreage | % Total | Acres               | Farm Acreage | % Total     | Acres | Farm Acreage | % Total | Acres   | Farm Acreage | % Total   | Acres           | Farm Acreage |  |
|                            |           |              |         |                     |              |             |       |              |         |         |              |           |                 |              |  |
| <b>A—Border</b>            |           |              |         |                     |              |             |       |              |         |         |              |           |                 |              |  |
| Essex.....                 | 1951..... | 375,636      |         | 343,327             | 91.4         | 282,652     | 75.2  | 35,615       | 9.5     | 25,060  | 6.7          | 32,309    | 8.6             |              |  |
|                            | 1961..... | 379,962      |         | 350,526             | 92.3         | 312,981     | 82.4  | 17,702       | 4.7     | 19,843  | 5.2          | 29,436    | 7.7             |              |  |
|                            | 1966..... | 367,501      |         | 345,190             | 93.9         | 315,471     | 85.8  | 10,919       | 3.0     | 18,800  | 5.1          | 22,311    | 6.1             |              |  |
| Kent.....                  | 1951..... | 553,931      |         | 483,834             | 87.3         | 394,958     | 71.3  | 65,290       | 11.8    | 23,586  | 4.3          | 70,097    | 12.7            |              |  |
|                            | 1961..... | 557,133      |         | 497,823             | 89.4         | 443,682     | 79.6  | 34,440       | 6.2     | 19,701  | 3.5          | 59,310    | 10.6            |              |  |
|                            | 1966..... | 555,313      |         | 515,069             | 92.8         | 465,625     | 83.9  | 32,814       | 5.9     | 16,630  | 3.0          | 40,244    | 7.2             |              |  |
| Sub-total.....             | 1951..... | 929,567      |         | 827,161             | 89.0         | 677,610     | 72.9  | 100,905      | 10.9    | 48,646  | 5.2          | 102,406   | 11.0            |              |  |
|                            | 1961..... | 937,095      |         | 848,349             | 90.5         | 756,663     | 80.7  | 52,142       | 5.6     | 39,544  | 4.2          | 88,746    | 9.5             |              |  |
|                            | 1966..... | 922,814      |         | 860,259             | 93.2         | 781,096     | 84.7  | 43,733       | 4.7     | 35,430  | 3.8          | 62,555    | 6.8             |              |  |
| <b>B—Lambton</b>           |           |              |         |                     |              |             |       |              |         |         |              |           |                 |              |  |
| Lambton.....               | 1951..... | 613,215      |         | 479,739             | 78.2         | 280,737     | 45.8  | 171,167      | 27.9    | 27,835  | 4.5          | 133,476   | 21.8            |              |  |
|                            | 1961..... | 600,850      |         | 477,070             | 79.4         | 311,867     | 51.9  | 138,044      | 23.0    | 27,159  | 4.5          | 123,780   | 20.6            |              |  |
|                            | 1966..... | 596,387      |         | 496,398             | 83.2         | 347,921     | 58.3  | 118,712      | 19.9    | 29,765  | 5.0          | 99,989    | 16.8            |              |  |
| Total, Region.....         | 1951..... | 1,542,782    |         | 1,306,900           | 84.7         | 958,347     | 62.1  | 272,072      | 17.6    | 76,481  | 5.0          | 235,882   | 15.3            |              |  |
|                            | 1961..... | 1,537,945    |         | 1,325,419           | 86.2         | 1,068,530   | 69.5  | 190,186      | 12.4    | 66,703  | 4.3          | 212,526   | 13.8            |              |  |
|                            | 1966..... | 1,519,201    |         | 1,356,657           | 89.3         | 1,129,017   | 74.3  | 162,445      | 10.7    | 65,195  | 4.3          | 162,544   | 10.7            |              |  |
| <b>Total, Ontario.....</b> |           |              |         |                     |              |             |       |              |         |         |              |           |                 |              |  |
|                            | 1951..... | 20,880,054   |         | 12,693,250          | 60.8         | 8,645,302   | 41.4  | 3,235,345    | 15.5    | 812,603 | 3.9          | 8,186,804 | 39.2            |              |  |
|                            | 1961..... | 18,578,507   |         | 12,032,924          | 64.8         | 7,990,358   | 43.0  | 3,295,609    | 17.7    | 746,957 | 4.0          | 6,545,583 | 35.2            |              |  |
|                            | 1966..... | 17,826,045   |         | 12,004,305          | 67.3         | 8,358,741   | 46.9  | 2,935,693    | 16.4    | 709,871 | 4.0          | 5,821,740 | 32.7            |              |  |

# AGRICULTURE

## COMMERCIAL FARMS, COUNTIES, LAKE ST. CLAIR REGION, 1961 AND 1966

|                           |             | Total No.<br>of Farms | Commercial Farms |             |
|---------------------------|-------------|-----------------------|------------------|-------------|
|                           |             |                       | No.              | %           |
| <b>A—Border</b>           |             |                       |                  |             |
| Essex.....                | 1961        | 4,860                 | 3,026            | 62.3        |
|                           | 1966        | 4,482                 | 3,108            | 69.3        |
| Kent.....                 | 1961        | 4,759                 | 3,559            | 74.8        |
|                           | 1966        | 4,187                 | 3,548            | 84.7        |
| Sub-total.....            | 1961        | 9,619                 | 6,585            | 68.5        |
|                           | 1966        | 8,669                 | 6,656            | 76.8        |
| <b>B—Lambton</b>          |             |                       |                  |             |
| Lambton.....              | 1961        | 4,206                 | 2,332            | 55.4        |
|                           | 1966        | 4,004                 | 2,775            | 69.3        |
| <b>Total, Region.....</b> | <b>1961</b> | <b>13,825</b>         | <b>8,917</b>     | <b>64.5</b> |
|                           | <b>1966</b> | <b>12,673</b>         | <b>9,431</b>     | <b>74.4</b> |
| Total, Ontario.....       | 1961        | 121,333               | 69,667           | 57.4        |
|                           | 1966        | 109,887               | 70,724           | 64.4        |

## VALUE OF AGRICULTURAL PRODUCTS SOLD, COUNTIES, LAKE ST. CLAIR REGION, 1951 AND 1961\*

|                                |             | Total Value of<br>Agricultural<br>Products Sold<br>(\$000's) | Value of<br>Agricultural<br>Products<br>Sold Per<br>Farm<br>\$ | Change in<br>Value of<br>Agricultural<br>Products<br>Sold Per<br>Farm<br>1951-1961<br>% | Value of<br>Agricultural<br>Products Sold<br>Per Acre<br>\$ |
|--------------------------------|-------------|--|--|---|---|
| <b>A—Border</b>                |             |  |  |   |   |
| Essex . . . . .                | 1951        | 19,101   | 3,593  | +95.2   | 50.8  |
|                                | 1961        | 34,080   | 7,012  |   | 90.0  |
| Kent . . . . .                 | 1951        | 27,210   | 5,121  | +49.8   | 49.1  |
|                                | 1961        | 36,497   | 7,669  |   | 65.5  |
| Sub-total . . . . .            | 1951        | 46,311   | 4,357  | +68.4   | 49.8  |
|                                | 1961        | 70,577   | 7,337  |   | 75.3  |
| <b>B—Lambton</b>               |             |  |  |   |   |
| Lambton . . . . .              | 1951        | 16,723   | 3,599  | +46.9   | 27.3  |
|                                | 1961        | 22,233   | 5,286  |   | 37.0  |
| <b>Total, Region . . . . .</b> | <b>1951</b> | <b>63,034</b>  | <b>4,127</b>   | <b>+62.7</b>  | <b>40.9</b>   |
|                                | <b>1961</b> | <b>92,810</b>  | <b>6,713</b>   |   | <b>60.3</b>   |
| Total, Ontario . . . . .       | 1951        | 538,274  | 3,590  | +74.9   | 25.8  |
|                                | 1961        | 761,668  | 6,278  |   | 41.0  |

\*1966 D.B.S. Census data not available.

## ESTIMATE OF PRODUCTION COSTS AND RETURNS OF SELECTED CROPS\*, ONTARIO

| Returns and Costs<br>Per Acre        | Winter Wheat <sup>(1)</sup> |        | Grain Corn <sup>(2)</sup> |         | Soybeans <sup>(3)</sup> |       | Sugar Beets <sup>(4)</sup> |     | Hay <sup>(5)</sup> |          | Processing<br>Tomatoes | Processing<br>Peas <sup>(6)</sup> |
|--------------------------------------|-----------------------------|--------|---------------------------|---------|-------------------------|-------|----------------------------|-----|--------------------|----------|------------------------|-----------------------------------|
|                                      | 38 bu.                      | 71 bu. | 22 tons                   | 14 tons | 2 tons                  | 42    | 17 tons                    | 623 | 192                | 1.8 tons |                        |                                   |
| Yield Per Acre.....                  | 72                          | 90     | 63                        | 183     | 42                      | 300   | 79                         |     |                    |          |                        |                                   |
| Crop Value.....(\$)                  | 21                          | 30     | 12                        | 99      | 14                      | 134   | 39                         |     |                    |          |                        |                                   |
| Operating Costs.....(\$)             | 30                          | 39     | 34                        | 59      | 25                      | 437   | 118                        |     |                    |          |                        |                                   |
| Fixed Costs.....(\$)                 | 51                          | 69     | 46                        | 158     | 39                      | 323   | 113                        |     |                    |          |                        |                                   |
| Total Costs.....(\$)                 | 51                          | 60     | 51                        | 84      | 28                      | 186   | 74                         |     |                    |          |                        |                                   |
| Margin Over Operating Costs.....(\$) | 21                          | 21     | 17                        | 25      | 3                       | 31    | 33                         |     |                    |          |                        |                                   |
| Returns.....                         | 58                          | 56     | 73                        | 37      | 65                      | 177.0 |                            |     |                    |          |                        |                                   |
| Fixed Costs as % of Total Costs..... |                             |        |                           |         |                         |       |                            |     |                    |          |                        |                                   |
| Labour Hours Per Acre.....           | 7.0                         | 8.5    | 7.4                       | 34.0    | 6.0                     |       |                            |     |                    |          |                        |                                   |

n.a. Not available.

\*Source: Farm Economics and Statistics Branch, Ontario Department of Agriculture.

(1) 1956-58

(2) 1958-60

(3) 1963

(4) 1964

(5) 1961-62

(6) 1963



ACREAGE AND FARM VALUE OF TOTAL FIELD CROPS,  
COUNTIES, LAKE ST. CLAIR REGION, 1951, 1961, 1965 AND 1966

|                           | 1951             |               |                 |               | 1961             |               |                  |               |
|---------------------------|------------------|---------------|-----------------|---------------|------------------|---------------|------------------|---------------|
|                           | Area             |               | Farm Value      |               | Area             |               | Farm Value       |               |
|                           | Acres            | % of Province | (\$000's)       | % of Province | Acres            | % of Province | (\$000's)        | % of Province |
| <b>A—Border</b>           |                  |               |                 |               |                  |               |                  |               |
| Essex.....                | 255,574          | 3.1           | 18,769.8        | 5.0           | 271,889          | 3.6           | 17,778.3         | 5.4           |
| Kent.....                 | 361,754          | 4.4           | 25,219.5        | 6.7           | 410,842          | 5.4           | 28,913.4         | 8.8           |
| Sub-total.....            | 617,328          | 7.5           | 43,989.3        | 11.7          | 682,731          | 9.0           | 46,691.7         | 14.2          |
| <b>B—Lambton</b>          |                  |               |                 |               |                  |               |                  |               |
| Lambton.....              | 270,310          | 3.3           | 14,534.8        | 3.9           | 305,303          | 4.0           | 17,285.4         | 5.3           |
| <b>Total, Region.....</b> | <b>887,638</b>   | <b>10.8</b>   | <b>58,524.1</b> | <b>15.6</b>   | <b>988,034</b>   | <b>13.0</b>   | <b>63,977.1</b>  | <b>19.5</b>   |
| Total, Ontario.....       | 8,244,267        | 100.0         | 374,579.7       | 100.0         | 7,606,403        | 100.0         | 328,901.0        | 100.0         |
| 1965                      |                  |               |                 |               |                  |               |                  |               |
|                           | Area             |               | Farm Value      |               | Area             |               | Farm Value       |               |
|                           | Acres            | % of Province | (\$000's)       | % of Province | Acres            | % of Province | (\$000's)        | % of Province |
|                           | Acres            | % of Province | (\$000's)       | % of Province | Acres            | % of Province | (\$000's)        | % of Province |
| <b>A—Border</b>           |                  |               |                 |               |                  |               |                  |               |
| Essex.....                | 295,550          | 3.9           | 28,711.2        | 6.7           | 277,551          | 3.5           | 29,138.4         | 6.1           |
| Kent.....                 | 435,260          | 5.7           | 40,807.3        | 9.5           | 429,944          | 5.4           | 46,891.7         | 9.9           |
| Sub-total.....            | 730,810          | 9.6           | 69,518.5        | 16.2          | 707,495          | 8.9           | 76,030.1         | 16.0          |
| <b>B—Lambton</b>          |                  |               |                 |               |                  |               |                  |               |
| Lambton.....              | 305,590          | 4.0           | 20,208.9        | 4.7           | 341,532          | 4.3           | 26,305.5         | 5.6           |
| <b>Total, Region.....</b> | <b>1,036,400</b> | <b>13.6</b>   | <b>89,727.4</b> | <b>20.9</b>   | <b>1,049,027</b> | <b>13.2</b>   | <b>102,335.6</b> | <b>21.6</b>   |
| Total, Ontario.....       | 7,624,700        | 100.0         | 429,059.0       | 100.0         | 7,943,435        | 100.0         | 474,368.0        | 100.0         |

ACREAGE AND FARM VALUE OF SUGAR BEETS,  
COUNTIES, LAKE ST. CLAIR REGION, 1953 TO 1966

| Year      | Essex |               |       |         | Kent   |               |       |         | Lambton |               |       |         | Total Region |               |       |         | Total, Ontario |               |        |         |
|-----------|-------|---------------|-------|---------|--------|---------------|-------|---------|---------|---------------|-------|---------|--------------|---------------|-------|---------|----------------|---------------|--------|---------|
|           | Area  |               | Price |         | Area   |               | Price |         | Area    |               | Price |         | Area         |               | Price |         | Area           |               | Price  |         |
|           | Acres | % of Province | \$    | Per Ton | Acres  | % of Province | \$    | Per Ton | Acres   | % of Province | \$    | Per Ton | Acres        | % of Province | \$    | Per Ton | Acres          | % of Province | \$     | Per Ton |
| 1953..... | 343   | 1.5           | 12.10 |         | 10,185 | 44.7          | 12.85 |         | 4,619   | 20.2          | 12.10 |         | 15,147       | 66.4          | 12.67 |         | 22,800         |               | 12.86  |         |
| 1954..... | 463   | 2.0           | 9.33  |         | 8,557  | 36.4          | 10.08 |         | 4,475   | 19.0          | 9.33  |         | 13,495       | 57.4          | 9.85  |         | 23,500         |               | 10.08  |         |
| 1955..... | 1,092 | 5.8           | 10.88 |         | 9,185  | 49.1          | 11.63 |         | 3,425   | 18.3          | 10.88 |         | 13,702       | 73.2          | 11.42 |         | 18,723         |               | 11.63  |         |
| 1956..... | 862   | 6.1           | 14.96 |         | 7,113  | 50.2          | 14.96 |         | 2,403   | 17.0          | 14.21 |         | 10,378       | 73.3          | 14.82 |         | 14,158         |               | 14.96  |         |
| 1957..... | 932   | 4.7           | 13.64 |         | 11,509 | 58.3          | 13.74 |         | 3,086   | 15.7          | 13.42 |         | 15,527       | 78.7          | 13.68 |         | 19,738         |               | 13.62  |         |
| 1958..... | 3,699 | 11.7          | 12.87 |         | 17,728 | 56.2          | 12.51 |         | 4,586   | 14.5          | 12.47 |         | 26,013       | 82.4          | 12.55 |         | 31,584         |               | 12.59  |         |
| 1959..... | 5,403 | 16.2          | 10.52 |         | 19,222 | 57.7          | 10.15 |         | 4,012   | 12.1          | 10.55 |         | 28,637       | 86.0          | 10.28 |         | 33,306         |               | 10.36  |         |
| 1960..... | 1,810 | 12.7          | 13.94 |         | 9,877  | 69.3          | 13.80 |         | 1,122   | 7.8           | 13.68 |         | 12,809       | 89.8          | 13.81 |         | 14,258         |               | 13.83  |         |
| 1961..... | 1,560 | 9.5           | 12.00 |         | 11,797 | 72.2          | 11.36 |         | 1,718   | 10.5          | 12.25 |         | 15,075       | 92.2          | 11.51 |         | 16,353         |               | 11.58  |         |
| 1962..... | 1,111 | 8.8           | 16.21 |         | 9,240  | 73.0          | 15.48 |         | 1,175   | 9.3           | 15.15 |         | 11,526       | 91.1          | 15.52 |         | 12,653         |               | 15.58  |         |
| 1963..... | 1,859 | 11.1          | 23.32 |         | 11,524 | 68.5          | 23.19 |         | 1,556   | 9.3           | 23.29 |         | 14,939       | 88.9          | 23.21 |         | 16,811         |               | 23.22  |         |
| 1964..... | 1,961 | 10.5          | 13.13 |         | 13,218 | 70.5          | 12.47 |         | 1,839   | 9.8           | 12.96 |         | 17,018       | 90.8          | 12.58 |         | 18,742         |               | 12.64* |         |
| 1965..... | 1,376 | 12.6          | 16.80 |         | 7,943  | 72.5          | 13.59 |         | 915     | 8.4           | 13.85 |         | 10,234       | 93.5          | 14.02 |         | 10,950         |               | 14.00* |         |
| 1966..... | 993   | 8.3           | n.a.  |         | 8,782  | 73.8          | n.a.  |         | 1,037   | 8.7           | n.a.  |         | 10,812       | 90.8          | n.a.  |         | 11,908         |               | 13.50* |         |

n.a. Not available.

\*Estimated.

Note: Prior to 1953 statistics are not available on a county basis.

Source: Ontario Department of Agriculture, *Agricultural Statistics For Ontario*, and Canada and Dominion Sugar Company Limited.

# AGRICULTURE

## ACREAGE AND FARM VALUE OF SELECTED FIELD CROPS, COUNTIES, LAKE ST. CLAIR REGION, 1951, 1956, 1961, 1965 AND 1966

|                         |                  | 1951    |       |             |       | 1956    |       |             |       |
|-------------------------|------------------|---------|-------|-------------|-------|---------|-------|-------------|-------|
|                         |                  | Acres   |       | Value       |       | Acres   |       | Value       |       |
|                         |                  | % Total |       | % Total     |       | % Total |       | % Total     |       |
|                         |                  | No.     | Crops | ( \$000's ) | Crops | No.     | Crops | ( \$000's ) | Crops |
| <b>A—Border</b>         |                  |         |       |             |       |         |       |             |       |
| Essex . . . . .         | Winter Wheat     | 42,298  | 16.6  | 2,663.8     | 14.2  | 39,189  | 14.8  | 2,032.0     | 14.5  |
|                         | Corn (Husking)   | 64,230  | 25.1  | 6,541.8     | 34.9  | 75,911  | 28.7  | 4,798.9     | 34.3  |
|                         | Oats             | 37,248  | 14.6  | 1,463.4     | 7.8   | 29,517  | 11.2  | 840.4       | 6.0   |
|                         | Soybeans         | 62,785  | 24.6  | 4,432.4     | 23.6  | 74,607  | 28.2  | 3,398.4     | 24.3  |
|                         | Hay              | 35,566  | 13.9  | 1,386.1     | 7.4   | 31,082  | 11.8  | 1,406.0     | 10.1  |
|                         | Total, All Crops | 255,574 | 100.0 | 18,769.8    | 100.0 | 264,122 | 100.0 | 13,980.7    | 100.0 |
| Kent . . . . .          | Winter Wheat     | 67,338  | 18.6  | 4,432.4     | 17.6  | 59,630  | 15.0  | 3,274.2     | 14.7  |
|                         | Corn (Husking)   | 99,796  | 27.6  | 9,269.9     | 36.8  | 145,815 | 36.6  | 9,468.3     | 42.5  |
|                         | Oats             | 46,531  | 12.9  | 2,002.3     | 7.9   | 33,298  | 8.4   | 1,047.8     | 4.7   |
|                         | Soybeans         | 60,320  | 16.7  | 4,258.4     | 16.9  | 89,167  | 22.4  | 4,306.1     | 19.3  |
|                         | Hay              | 36,214  | 10.0  | 1,377.5     | 5.5   | 29,498  | 7.4   | 1,462.0     | 6.6   |
|                         | Total, All Crops | 361,754 | 100.0 | 25,219.5    | 100.0 | 398,230 | 100.0 | 22,260.8    | 100.0 |
| Sub-total . . . . .     | Winter Wheat     | 109,636 | 17.8  | 7,096.2     | 16.1  | 98,819  | 14.9  | 5,306.2     | 14.6  |
|                         | Corn (Husking)   | 164,026 | 26.6  | 15,811.7    | 35.9  | 221,726 | 33.5  | 14,267.2    | 39.4  |
|                         | Oats             | 83,779  | 13.6  | 3,465.7     | 7.9   | 62,815  | 9.5   | 1,888.2     | 5.2   |
|                         | Soybeans         | 123,105 | 19.9  | 8,690.8     | 19.8  | 163,774 | 24.7  | 7,704.5     | 21.3  |
|                         | Hay              | 71,780  | 11.6  | 2,763.6     | 6.3   | 60,580  | 9.1   | 2,868.0     | 7.9   |
|                         | Total, All Crops | 617,328 | 100.0 | 43,989.3    | 100.0 | 662,352 | 100.0 | 36,241.5    | 100.0 |
| <b>B—Lambton</b>        |                  |         |       |             |       |         |       |             |       |
| Lambton . . . . .       | Winter Wheat     | 49,757  | 18.4  | 2,641.4     | 18.2  | 47,000  | 16.3  | 2,524.0     | 18.7  |
|                         | Corn (Husking)   | 31,782  | 11.8  | 3,407.6     | 23.4  | 58,236  | 20.2  | 3,861.8     | 28.7  |
|                         | Oats             | 63,326  | 23.4  | 2,759.5     | 19.0  | 41,927  | 14.6  | 1,191.4     | 8.8   |
|                         | Soybeans         | 10,339  | 3.8   | 617.6       | 4.2   | 38,804  | 13.5  | 1,851.1     | 13.7  |
|                         | Hay              | 71,407  | 26.4  | 2,649.0     | 18.2  | 66,636  | 23.1  | 2,426.2     | 18.0  |
|                         | Total, All Crops | 270,310 | 100.0 | 14,534.8    | 100.0 | 287,963 | 100.0 | 13,471.1    | 100.0 |
| Total, Region . . . . . | Winter Wheat     | 159,393 | 18.0  | 9,737.6     | 16.6  | 145,819 | 15.3  | 7,830.2     | 15.8  |
|                         | Corn (Husking)   | 195,808 | 22.1  | 19,219.3    | 32.8  | 279,962 | 29.5  | 18,129.0    | 36.5  |
|                         | Oats             | 147,105 | 16.6  | 6,225.2     | 10.6  | 104,742 | 11.0  | 3,079.6     | 6.2   |
|                         | Soybeans         | 133,444 | 15.0  | 9,308.4     | 15.9  | 202,578 | 21.3  | 9,555.6     | 19.2  |
|                         | Hay              | 143,187 | 16.1  | 5,412.6     | 9.2   | 127,216 | 13.4  | 5,294.2     | 10.6  |
|                         | Total, All Crops | 887,638 | 100.0 | 58,524.1    | 100.0 | 950,315 | 100.0 | 49,712.6    | 100.0 |

| 1961    |               |           |               | 1965      |               |           |               | 1966      |               |           |               |
|---------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|
| Acres   |               | Value     |               | Acres     |               | Value     |               | Acres     |               | Value     |               |
| No.     | % Total Crops | (\$000's) | % Total Crops | No.       | % Total Crops | (\$000's) | % Total Crops | No.       | % Total Crops | (\$000's) | % Total Crops |
| 54,329  | 20.0          | 2,701.8   | 15.2          | 29,000    | 9.8           | 2,003.8   | 7.0           | 38,462    | 13.9          | 3,457.3   | 11.9          |
| 77,723  | 28.6          | 6,267.6   | 35.3          | 112,900   | 38.2          | 12,422.7  | 43.3          | 89,829    | 32.4          | 11,029.2  | 37.9          |
| 32,666  | 12.0          | 1,501.8   | 8.4           | 25,400    | 8.6           | 1,389.9   | 4.8           | 28,288    | 10.2          | 1,287.2   | 4.4           |
| 63,605  | 23.4          | 4,255.3   | 23.9          | 85,500    | 28.9          | 7,240.7   | 25.2          | 83,392    | 30.0          | 8,659.9   | 29.7          |
| 29,616  | 10.9          | 1,321.6   | 7.4           | 26,500    | 9.0           | 1,693.3   | 5.9           | 20,252    | 7.3           | 1,307.2   | 4.5           |
| 271,889 | 100.0         | 17,778.3  | 100.0         | 295,550   | 100.0         | 28,711.2  | 100.0         | 277,551   | 100.0         | 29,138.4  | 100.0         |
| 88,000  | 21.4          | 4,599.2   | 15.9          | 50,100    | 11.5          | 3,409.8   | 8.4           | 41,499    | 9.7           | 3,914.7   | 8.3           |
| 128,165 | 31.2          | 11,006.8  | 38.1          | 183,200   | 42.1          | 20,377.7  | 49.9          | 195,528   | 45.5          | 25,198.5  | 53.7          |
| 43,168  | 10.5          | 2,249.2   | 7.8           | 34,500    | 7.9           | 2,070.0   | 5.1           | 35,316    | 8.2           | 1,990.5   | 4.2           |
| 84,168  | 20.5          | 6,477.0   | 22.4          | 94,700    | 21.8          | 8,168.0   | 20.0          | 96,184    | 22.4          | 9,928.0   | 21.2          |
| 25,476  | 6.2           | 1,268.7   | 4.4           | 23,000    | 5.3           | 1,570.7   | 3.8           | 17,899    | 4.2           | 1,298.9   | 2.8           |
| 410,842 | 100.0         | 28,913.4  | 100.0         | 435,260   | 100.0         | 40,807.3  | 100.0         | 429,944   | 100.0         | 46,891.7  | 100.0         |
| 142,329 | 20.8          | 7,301.0   | 15.6          | 79,100    | 10.8          | 5,413.6   | 7.8           | 79,961    | 11.3          | 7,372.0   | 9.7           |
| 205,888 | 30.2          | 17,274.4  | 37.0          | 296,100   | 40.5          | 32,800.4  | 47.2          | 285,357   | 40.3          | 36,227.7  | 47.6          |
| 75,834  | 11.1          | 3,751.0   | 8.0           | 59,900    | 8.2           | 3,459.9   | 5.0           | 63,604    | 9.0           | 3,277.7   | 4.3           |
| 147,773 | 21.6          | 10,732.3  | 23.0          | 180,200   | 24.7          | 15,408.7  | 22.2          | 179,576   | 25.4          | 18,587.9  | 24.4          |
| 55,092  | 8.1           | 2,590.3   | 5.5           | 49,500    | 6.8           | 3,264.0   | 4.7           | 38,151    | 5.4           | 2,606.1   | 3.4           |
| 682,731 | 100.0         | 46,691.7  | 100.0         | 730,810   | 100.0         | 69,518.5  | 100.0         | 707,495   | 100.0         | 76,030.1  | 100.0         |
| 60,016  | 19.7          | 3,017.2   | 17.5          | 41,300    | 13.5          | 2,573.8   | 12.7          | 37,035    | 10.8          | 3,168.0   | 12.0          |
| 40,999  | 13.4          | 3,472.7   | 20.1          | 60,900    | 19.9          | 5,700.2   | 28.2          | 72,055    | 21.1          | 7,355.7   | 28.0          |
| 61,795  | 20.2          | 2,950.1   | 17.1          | 53,500    | 17.5          | 2,480.3   | 12.3          | 43,686    | 12.8          | 1,974.6   | 7.5           |
| 37,640  | 12.3          | 2,540.7   | 14.7          | 48,700    | 15.9          | 3,471.5   | 17.2          | 58,189    | 17.0          | 5,150.1   | 19.6          |
| 68,460  | 22.4          | 2,696.2   | 15.6          | 58,000    | 19.0          | 2,737.2   | 13.5          | 67,925    | 19.9          | 4,170.9   | 15.9          |
| 305,303 | 100.0         | 17,285.4  | 100.0         | 305,590   | 100.0         | 20,208.9  | 100.0         | 341,532   | 100.0         | 26,305.5  | 100.0         |
| 202,345 | 20.5          | 10,318.2  | 16.1          | 120,400   | 11.6          | 7,987.4   | 8.9           | 116,996   | 11.2          | 10,540.0  | 10.3          |
| 246,887 | 25.0          | 20,747.1  | 32.4          | 357,000   | 34.4          | 38,500.6  | 42.9          | 357,412   | 34.1          | 43,583.4  | 42.6          |
| 137,629 | 13.9          | 6,701.1   | 10.5          | 113,400   | 10.9          | 5,940.2   | 6.6           | 107,290   | 10.2          | 5,252.3   | 5.1           |
| 185,413 | 18.8          | 13,273.0  | 20.7          | 228,900   | 22.1          | 18,880.2  | 21.0          | 237,765   | 22.7          | 23,738.0  | 23.2          |
| 123,552 | 12.5          | 5,286.5   | 8.3           | 107,500   | 10.4          | 6,001.2   | 6.7           | 106,076   | 10.1          | 6,777.0   | 6.6           |
| 988,034 | 100.0         | 63,977.1  | 100.0         | 1,036,400 | 100.0         | 89,727.4  | 100.0         | 1,049,027 | 100.0         | 102,335.6 | 100.0         |

# AGRICULTURE

## ACREAGE AND FARM VALUE OF CANNING CROPS, COUNTIES, LAKE ST. CLAIR REGION, 1966

|   | Area<br>Acres | Farm Value          |                |
|---|---------------|---------------------|----------------|
|   |               | Total<br>(\$'000's) | Per Acre<br>\$ |
| <b>Tomatoes</b>   |               |                     |                |
| Essex.....  | 10,147        | 5,125               | 505            |
| Kent.....   | 6,795         | 4,969               | 731            |
| Lambton.....  | 248           | 153                 | 617            |
| <b>Total, Region.....</b>   | <b>17,190</b> | <b>10,247</b>       | <b>596</b>     |
| Per Cent of Ontario.....  | (76.9)        | (82.0)              |                |
| Total, Ontario.....   | 22,353        | 12,490              | 559            |
| <b>Green Peas</b>   |               |                     |                |
| Essex.....  | 2,387         | 221                 | 93             |
| Kent.....   | 3,836         | 562                 | 147            |
| Lambton.....  | —             | —                   | —              |
| <b>Total, Region.....</b>   | <b>6,223</b>  | <b>783</b>          | <b>126</b>     |
| Per Cent of Ontario.....  | (31.9)        | (38.7)              |                |
| Total, Ontario.....   | 19,497        | 2,023               | 104            |
| <b>Sweet Corn</b>   |               |                     |                |
| Essex.....  | 6,885         | 684                 | 99             |
| Kent.....   | 5,156         | 814                 | 158            |
| Lambton.....  | 89            | 13                  | 146            |
| <b>Total, Region.....</b>   | <b>12,130</b> | <b>1,511</b>        | <b>125</b>     |
| Per Cent of Ontario.....  | (45.1)        | (44.3)              |                |
| Total, Ontario.....   | 26,918        | 3,409               | 127            |
| <b>Total, Major Canning Crops</b>   |               |                     |                |
| Essex.....  | 19,419        | 6,030               | 311            |
| Kent.....   | 15,787        | 6,345               | 402            |
| Lambton.....  | 337           | 166                 | 493            |
| <b>Total, Region.....</b>   | <b>35,543</b> | <b>12,541</b>       | <b>353</b>     |
| Per Cent of Ontario.....  | (51.7)        | (70.0)              |                |
| Total, Ontario.....   | 68,768        | 17,922              | 261            |
| <b>Minor Canning Crops (Green and Wax Beans, Carrots, Cabbage, Beets, Pumpkin and Squash, Lima Beans)</b> |               |                     |                |
| Essex.....  | n.a.          | 389                 | n.a.           |
| Kent.....   | n.a.          | 848                 | n.a.           |
| Lambton.....  | n.a.          | 77                  | n.a.           |
| <b>Total, Region.....</b>   | <b>n.a.</b>   | <b>1,313</b>        | <b>n.a.</b>    |
| Per Cent of Ontario.....  | —             | (58.8)              |                |
| Total, Ontario.....   | n.a.          | 2,232               | n.a.           |
| <b>Grand Total, Canning Crops</b>   |               |                     |                |
| Essex.....  | n.a.          | 6,419               | n.a.           |
| Kent.....   | n.a.          | 7,193               | n.a.           |
| Lambton.....  | n.a.          | 243                 | n.a.           |
| <b>Total, Region.....</b>   | <b>n.a.</b>   | <b>13,855</b>       | <b>n.a.</b>    |
| Per Cent of Ontario.....  | —             | (68.7)              |                |
| Total, Ontario.....   | n.a.          | 20,154              | n.a.           |

n. a. Not available.



**NUMBER OF DAIRY COWS AND BEEF CATTLE,  
COUNTIES, LAKE ST. CLAIR REGION, 1951, 1956, 1961 AND 1965**

|                                |             | Dairy Cows *  |            | Beef Cattle    |            |
|--------------------------------|-------------|---------------|------------|----------------|------------|
|                                | Year        | No.           | Index      | No.            | Index      |
| <b>A—Border</b>                |             |               |            |                |            |
| Essex . . . . .                | 1951        | 21,237        | 100        | 2,915          | 100        |
|                                | 1956        | 18,012        | 85         | 3,233          | 111        |
|                                | 1961        | 17,995        | 85         | 5,170          | 177        |
|                                | 1965        | 15,400        | 73         | 8,700          | 298        |
| Kent . . . . .                 | 1951        | 13,715        | 100        | 18,254         | 100        |
|                                | 1956        | 8,318         | 61         | 21,576         | 118        |
|                                | 1961        | 6,994         | 51         | 32,234         | 177        |
|                                | 1965        | 5,100         | 37         | 46,400         | 254        |
| Sub-total . . . . .            | 1951        | 34,952        | 100        | 21,169         | 100        |
|                                | 1956        | 26,330        | 75         | 24,809         | 117        |
|                                | 1961        | 24,989        | 71         | 37,404         | 177        |
|                                | 1965        | 20,500        | 59         | 55,100         | 260        |
| <b>B—Lambton</b>               |             |               |            |                |            |
| Lambton . . . . .              | 1951        | 26,298        | 100        | 31,519         | 100        |
|                                | 1956        | 24,454        | 93         | 37,998         | 121        |
|                                | 1961        | 24,503        | 93         | 47,585         | 151        |
|                                | 1965        | 20,400        | 78         | 56,800         | 180        |
| <b>Total, Region . . . . .</b> | <b>1951</b> | <b>61,250</b> | <b>100</b> | <b>52,688</b>  | <b>100</b> |
|                                | <b>1956</b> | <b>50,784</b> | <b>83</b>  | <b>62,807</b>  | <b>119</b> |
|                                | <b>1961</b> | <b>49,492</b> | <b>81</b>  | <b>84,989</b>  | <b>161</b> |
|                                | <b>1965</b> | <b>40,900</b> | <b>67</b>  | <b>111,900</b> | <b>212</b> |
| Total, Ontario . . . . .       | 1951        | 1,236,841     | 100        | 600,770        | 100        |
|                                | 1956        | 1,288,231     | 104        | 859,489        | 143        |
|                                | 1961        | 1,279,695     | 103        | 1,031,633      | 172        |
|                                | 1965        | 1,218,000     | 98         | 1,307,000      | 218        |

\*Yearlings for milk purposes included.

# AGRICULTURE

## NUMBER AND FARM VALUE OF LIVESTOCK, COUNTIES, LAKE ST. CLAIR REGION, JUNE 1ST, 1951, 1956, 1961, 1965 AND 1966

|                      |      | Horses     |             |                   | Cattle     |             |                   |
|----------------------|------|------------|-------------|-------------------|------------|-------------|-------------------|
|                      |      | Farm Value |             |                   | Farm Value |             |                   |
|                      | Year | No.        | ( \$000's ) | % Total Livestock | No.        | ( \$000's ) | % Total Livestock |
| A—Border             |      |            |             |                   |            |             |                   |
| Essex . . . . .      | 1951 | 3,380      | 302         | 3.6               | 30,166     | 6,968       | 81.6              |
|                      | 1956 | 1,087      | 107         | 2.5               | 27,833     | 3,480       | 80.5              |
|                      | 1961 | 933        | 139         | 2.2               | 31,373     | 4,846       | 77.8              |
|                      | 1965 | 900        | 153         | 2.4               | 31,540     | 5,117       | 79.0              |
|                      | 1966 | 962        | n.a.        |                   | 23,251     | n.a.        |                   |
| Kent . . . . .       | 1951 | 3,802      | 288         | 2.2               | 42,317     | 9,477       | 73.9              |
|                      | 1956 | 848        | 83          | 1.2               | 42,430     | 5,128       | 72.4              |
|                      | 1961 | 631        | 95          | 0.9               | 50,805     | 7,242       | 70.3              |
|                      | 1965 | 700        | 118         | 0.9               | 63,530     | 9,659       | 71.8              |
|                      | 1966 | 880        | n.a.        |                   | 54,244     | n.a.        |                   |
| Sub-total . . .      | 1951 | 7,182      | 590         | 2.8               | 72,483     | 16,445      | 77.0              |
|                      | 1956 | 1,935      | 190         | 1.7               | 70,263     | 8,608       | 75.5              |
|                      | 1961 | 1,564      | 234         | 1.4               | 82,178     | 12,088      | 73.1              |
|                      | 1965 | 1,600      | 271         | 1.4               | 95,070     | 14,776      | 74.1              |
|                      | 1966 | 1,842      | n.a.        |                   | 77,495     | n.a.        |                   |
| B—Lambton            |      |            |             |                   |            |             |                   |
| Lambton . . .        | 1951 | 6,827      | 498         | 2.5               | 80,001     | 16,575      | 84.1              |
|                      | 1956 | 2,880      | 294         | 2.4               | 89,007     | 10,289      | 84.2              |
|                      | 1961 | 1,921      | 288         | 1.7               | 102,177    | 14,787      | 85.7              |
|                      | 1965 | 1,600      | 270         | 1.4               | 105,800    | 15,848      | 83.8              |
|                      | 1966 | 2,026      | n.a.        |                   | 98,800     | n.a.        |                   |
| Total, Region . .    | 1951 | 14,009     | 1,088       | 2.7               | 152,484    | 33,020      | 80.4              |
|                      | 1956 | 4,815      | 484         | 2.1               | 159,270    | 18,897      | 80.0              |
|                      | 1961 | 3,485      | 522         | 1.6               | 184,355    | 26,875      | 79.5              |
|                      | 1965 | 3,200      | 541         | 1.4               | 200,870    | 30,624      | 78.8              |
|                      | 1966 | 3,868      | n.a.        |                   | 176,295    | n.a.        |                   |
| Total, Ontario . . . | 1951 | 260,627    | 22,516      | 3.5               | 2,465,875  | 539,697     | 83.7              |
|                      | 1956 | 139,661    | 15,502      | 4.0               | 2,900,670  | 328,787     | 83.8              |
|                      | 1961 | 88,864     | 14,456      | 2.6               | 3,115,677  | 481,870     | 87.1              |
|                      | 1965 | 79,000     | 13,746      | 2.3               | 3,344,000  | 506,549     | 86.5              |
|                      | 1966 | 75,355     | n.a.        |                   | 3,136,956  | n.a.        |                   |

n. a. Not available.

| Swine      |           |                   | Sheep and Lambs |           |                   | Total Livestock |                   |
|------------|-----------|-------------------|-----------------|-----------|-------------------|-----------------|-------------------|
| Farm Value |           |                   | Farm Value      |           |                   | Farm Value      |                   |
| No.        | (\$000's) | % Total Livestock | No.             | (\$000's) | % Total Livestock | (\$000's)       | % Total Livestock |
| 30,355     | 1,198     | 14.0              | 2,061           | 71        | 0.8               | 8,539           | 1.3               |
| 25,591     | 702       | 16.2              | 1,631           | 33        | 0.8               | 4,322           | 1.1               |
| 38,777     | 1,213     | 19.5              | 1,699           | 34        | 0.5               | 6,232           | 1.1               |
| 41,200     | 1,188     | 18.3              | 1,100           | 22        | 0.3               | 6,480           | 1.1               |
| 29,445     | n.a.      |                   | 980             | n.a.      |                   | n.a.            |                   |
| 69,862     | 2,945     | 23.0              | 2,964           | 109       | 0.9               | 12,819          | 2.0               |
| 61,647     | 1,779     | 25.1              | 4,692           | 95        | 1.3               | 7,085           | 1.8               |
| 91,946     | 2,870     | 27.9              | 4,934           | 94        | 0.9               | 10,301          | 1.9               |
| 108,900    | 3,598     | 26.7              | 4,100           | 82        | 0.6               | 13,457          | 2.3               |
| 88,609     | n.a.      |                   | 3,864           | n.a.      |                   | n.a.            |                   |
| 100,217    | 4,143     | 19.4              | 5,025           | 180       | 0.8               | 21,358          | 3.3               |
| 87,238     | 2,481     | 21.7              | 6,323           | 128       | 1.1               | 11,407          | 2.9               |
| 130,723    | 4,083     | 24.7              | 6,633           | 128       | 0.8               | 16,533          | 3.0               |
| 150,100    | 4,786     | 24.0              | 5,200           | 104       | 0.5               | 19,937          | 3.4               |
| 118,054    | n.a.      |                   | 4,844           | n.a.      |                   | n.a.            |                   |
| 50,349     | 1,982     | 10.1              | 17,848          | 654       | 3.3               | 19,709          | 3.1               |
| 51,852     | 1,310     | 10.7              | 16,683          | 322       | 2.7               | 12,215          | 3.1               |
| 61,768     | 1,906     | 11.0              | 14,100          | 282       | 1.6               | 17,263          | 3.1               |
| 79,600     | 2,507     | 13.3              | 13,900          | 280       | 1.5               | 18,905          | 3.2               |
| 88,545     | n.a.      |                   | 10,306          | n.a.      |                   | n.a.            |                   |
| 150,566    | 6,125     | 14.9              | 22,873          | 834       | 2.0               | 41,067          | 6.4               |
| 139,090    | 3,791     | 16.0              | 23,006          | 450       | 1.9               | 23,622          | 6.0               |
| 192,491    | 5,989     | 17.7              | 20,733          | 410       | 1.2               | 33,796          | 6.1               |
| 229,700    | 7,293     | 18.8              | 19,100          | 384       | 1.0               | 38,842          | 6.6               |
| 206,599    | n.a.      |                   | 15,150          | n.a.      |                   | n.a.            |                   |
| 1,755,490  | 70,006    | 10.9              | 360,201         | 12,413    | 1.9               | 644,632         | 100.0             |
| 1,548,280  | 40,466    | 10.3              | 393,811         | 7,464     | 1.9               | 392,219         | 100.0             |
| 1,686,340  | 50,472    | 9.1               | 341,086         | 6,287     | 1.2               | 553,085         | 100.0             |
| 1,940,000  | 59,840    | 10.2              | 302,000         | 5,718     | 1.0               | 585,853         | 100.0             |
| 1,935,595  | n.a.      |                   | 265,396         | n.a.      |                   | n.a.            |                   |

n. a. Not available.

# AGRICULTURE

## NUMBER OF CATTLE MARKETED\*, COUNTIES, LAKE ST. CLAIR REGION, 1951, 1961 AND 1966

|                                 | Year        | Number         | % of<br>Ontario<br>Total | Total<br>Inward<br>Movement | % of<br>Ontario<br>Total |
|---------------------------------|-------------|----------------|--------------------------|-----------------------------|--------------------------|
| <b>A—Border</b>                 |             |                |                          |                             |                          |
| Essex . . . . .                 | 1951        | 3,041          | 0.6                      | 285                         | 0.2                      |
|                                 | 1961        | 13,366         | 1.8                      | 166                         | 0.1                      |
|                                 | 1966        | 5,990          | 0.6                      | 495                         | 0.3                      |
| Kent . . . . .                  | 1951        | 18,669         | 3.4                      | 10,552                      | 9.2                      |
|                                 | 1961        | 37,074         | 4.9                      | 17,749                      | 11.7                     |
|                                 | 1966        | 50,279         | 5.1                      | 14,943                      | 8.3                      |
| Sub-total . . . . .             | 1951        | 21,710         | 4.0                      | 10,837                      | 9.4                      |
|                                 | 1961        | 50,440         | 6.7                      | 17,915                      | 11.8                     |
|                                 | 1966        | 56,269         | 5.7                      | 15,438                      | 8.6                      |
| <b>B—Lambton</b>                |             |                |                          |                             |                          |
| Lambton . . . . .               | 1951        | 16,975         | 3.1                      | 3,899                       | 3.4                      |
|                                 | 1961        | 19,202         | 2.6                      | 2,116                       | 1.4                      |
|                                 | 1966        | 26,022         | 2.6                      | 2,859                       | 1.6                      |
| <b>Total, Region . . . . .</b>  | <b>1951</b> | <b>38,685</b>  | <b>7.1</b>               | <b>14,736</b>               | <b>12.8</b>              |
|                                 | <b>1961</b> | <b>69,642</b>  | <b>9.3</b>               | <b>20,031</b>               | <b>13.2</b>              |
|                                 | <b>1966</b> | <b>82,291</b>  | <b>8.3</b>               | <b>18,297</b>               | <b>10.2</b>              |
| <b>Total, Ontario . . . . .</b> | <b>1951</b> | <b>543,454</b> | <b>100.0</b>             | <b>114,586</b>              | <b>100.0</b>             |
|                                 | <b>1961</b> | <b>751,054</b> | <b>100.0</b>             | <b>152,088</b>              | <b>100.0</b>             |
|                                 | <b>1966</b> | <b>990,861</b> | <b>100.0</b>             | <b>179,260</b>              | <b>100.0</b>             |

\*Sold to public stockyards, packing plants or direct to export.

**NUMBER AND FARM VALUE OF POULTRY,  
COUNTIES, LAKE ST. CLAIR REGION, JUNE 1ST, 1951, 1956, 1961, 1965 AND 1966**

|                     |           | Hens and Chickens |           | Turkeys |           | Other Poultry |          | Total Poultry Value \$ |
|---------------------|-----------|-------------------|-----------|---------|-----------|---------------|----------|------------------------|
| Year                |           | No.               | Value \$  | No.     | Value \$  | No.           | Value \$ |                        |
| A—Border            |           |                   |           |         |           |               |          |                        |
| Essex.....          | 1951      | 607,787           | 860,290   | 39,638  | 208,892   | 10,673        | 24,330   | 1,093,512              |
|                     | 1956      | 517,588           | 546,700   | 94,917  | 218,500   | 8,706         | 13,200   | 778,400                |
|                     | 1961      | 514,061           | 523,904   | 249,575 | 873,517   | 8,234         | 14,742   | 1,412,163              |
|                     | 1965      | 481,600           | 501,100   | n.a.    | n.a.      | n.a.          | n.a.     | n.a.                   |
|                     | 1966      | 481,855           | n.a.      | 154,703 | n.a.      | 3,808         | n.a.     | n.a.                   |
| Kent.....           | 1951      | 907,422           | 1,192,478 | 8,643   | 45,548    | 18,485        | 40,983   | 1,279,009              |
|                     | 1956      | 784,556           | 783,700   | 29,671  | 93,600    | 14,092        | 20,200   | 897,500                |
|                     | 1961      | 797,313           | 878,533   | 67,973  | 297,722   | 10,467        | 22,171   | 1,198,426              |
|                     | 1965      | 732,900           | 795,700   | n.a.    | n.a.      | n.a.          | n.a.     | n.a.                   |
|                     | 1966      | 659,670           | n.a.      | 82,562  | n.a.      | 6,140         | n.a.     | n.a.                   |
| Sub-total.....      | 1951      | 1,515,209         | 2,052,768 | 48,281  | 254,440   | 29,158        | 65,313   | 2,372,521              |
|                     | 1956      | 1,302,144         | 1,330,400 | 124,588 | 312,100   | 22,798        | 33,400   | 1,675,900              |
|                     | 1961      | 1,311,374         | 1,402,437 | 317,548 | 1,171,239 | 18,701        | 36,913   | 2,610,589              |
|                     | 1965      | 1,214,500         | 1,296,800 | n.a.    | n.a.      | n.a.          | n.a.     | n.a.                   |
| 1966                | 1,141,525 | n.a.              | 237,265   | n.a.    | 9,948     | n.a.          | n.a.     |                        |
| B—Lambton           |           |                   |           |         |           |               |          |                        |
| Lambton.....        | 1951      | 1,260,097         | 1,767,987 | 66,110  | 348,400   | 21,623        | 58,397   | 2,174,784              |
|                     | 1956      | 1,207,237         | 1,279,800 | 133,540 | 441,000   | 14,264        | 23,600   | 1,744,400              |
|                     | 1961      | 1,006,253         | 1,047,982 | 388,368 | 1,871,934 | 9,077         | 24,968   | 2,944,884              |
|                     | 1965      | 944,800           | 979,900   | n.a.    | n.a.      | n.a.          | n.a.     | n.a.                   |
|                     | 1966      | 891,386           | n.a.      | 316,209 | n.a.      | 6,605         | n.a.     | n.a.                   |
| Total, Region.....  | 1951      | 2,775,306         | 3,820,755 | 114,391 | 602,840   | 50,781        | 123,710  | 4,547,305              |
|                     | 1956      | 2,509,381         | 2,610,200 | 258,128 | 753,100   | 37,062        | 57,000   | 3,420,300              |
|                     | 1961      | 2,317,627         | 2,450,419 | 705,916 | 3,043,173 | 27,778        | 61,881   | 5,555,473              |
|                     | 1965      | 2,159,300         | 2,276,700 | n.a.    | n.a.      | n.a.          | n.a.     | n.a.                   |
| 1966                | 2,032,911 | n.a.              | 553,474   | n.a.    | 16,553    | n.a.          | n.a.     |                        |
| n.a. Not available. |           |                   |           |         |           |               |          |                        |

**AGRICULTURE**



# AGRICULTURE

## CAPITAL VALUE PER ACRE OF FARMS, COUNTIES, LAKE ST. CLAIR REGION, 1951 AND 1961\*

|                            | 1951        |                         |                              |  | 1961        |                         |                              |  | Change in<br>Index Value<br>Per Acre, 1961<br>(1951 = 100) |
|----------------------------|-------------|-------------------------|------------------------------|--|-------------|-------------------------|------------------------------|--|--|
|                            | Total Value |                         | Percentage of                |  | Total Value |                         | Percentage of                |  |  |
|                            | \$000's     | Value<br>Per Acre<br>\$ | Total Value<br>Per Acre<br>% |  | \$000's     | Value<br>Per Acre<br>\$ | Total Value<br>Per Acre<br>% |  |  |
| <b>A-Border</b>            |             |                         |                              |  |             |                         |                              |  |  |
| Essex                      |             |                         |                              |  |             |                         |                              |  |  |
| Land and Buildings.....    | 63,758.3    | 170.0                   | 69.0                         |  | 135,140.7   | 356.0                   | 80.0                         |  | 209  |
| Machinery and Equipment..  | 19,162.4    | 51.0                    | 21.0                         |  | 26,912.7    | 71.0                    | 16.0                         |  | 139  |
| Livestock and Poultry..... | 9,656.0     | 26.0                    | 10.0                         |  | 7,654.1     | 20.0                    | 4.0                          |  | 77   |
| Total.....                 | 92,576.7    | 247.0                   | 100.0                        |  | 169,707.5   | 447.0                   | 100.0                        |  | 181  |
| Kent                       |             |                         |                              |  |             |                         |                              |  |  |
| Land and Buildings.....    | 71,987.0    | 130.0                   | 66.0                         |  | 141,705.7   | 254.0                   | 77.0                         |  | 195  |
| Machinery and Equipment..  | 23,007.2    | 42.0                    | 21.0                         |  | 30,620.9    | 55.0                    | 17.0                         |  | 131  |
| Livestock and Poultry..... | 14,120.2    | 25.0                    | 13.0                         |  | 11,504.8    | 21.0                    | 6.0                          |  | 84   |
| Total.....                 | 109,114.4   | 197.0                   | 100.0                        |  | 183,831.4   | 330.0                   | 100.0                        |  | 168  |
| Sub-total                  |             |                         |                              |  |             |                         |                              |  |  |
| Land and Buildings.....    | 135,745.3   | 146.0                   | 67.0                         |  | 276,846.4   | 295.0                   | 79.0                         |  | 202  |
| Machinery and Equipment..  | 42,169.6    | 45.0                    | 21.0                         |  | 57,533.6    | 61.0                    | 16.0                         |  | 132  |
| Livestock and Poultry..... | 23,776.3    | 26.0                    | 12.0                         |  | 19,158.9    | 20.0                    | 5.0                          |  | 77   |
| Total.....                 | 201,691.2   | 217.0                   | 100.0                        |  | 353,538.9   | 376.0                   | 100.0                        |  | 173  |
| <b>B-Lambton</b>           |             |                         |                              |  |             |                         |                              |  |  |
| Lambton                    |             |                         |                              |  |             |                         |                              |  |  |
| Land and Buildings.....    | 43,618.2    | 71.0                    | 54.0                         |  | 77,219.5    | 129.0                   | 66.0                         |  | 182  |
| Machinery and Equipment..  | 14,698.5    | 24.0                    | 18.0                         |  | 18,921.9    | 31.0                    | 16.0                         |  | 129  |
| Livestock and Poultry..... | 21,921.5    | 36.0                    | 28.0                         |  | 20,210.7    | 34.0                    | 18.0                         |  | 94   |
| Total.....                 | 80,238.3    | 131.0                   | 100.0                        |  | 116,352.1   | 194.0                   | 100.0                        |  | 148  |
| Total, Region              |             |                         |                              |  |             |                         |                              |  |  |
| Land and Buildings.....    | 179,363.5   | 116.0                   | 63.0                         |  | 354,065.9   | 230.0                   | 75.0                         |  | 198  |
| Machinery and Equipment    | 56,868.1    | 37.0                    | 20.0                         |  | 76,455.5    | 50.0                    | 16.0                         |  | 135  |
| Livestock and Poultry....  | 45,697.8    | 30.0                    | 17.0                         |  | 39,369.6    | 26.0                    | 9.0                          |  | 87   |
| Total, Region.....         | 281,929.4   | 183.0                   | 100.0                        |  | 469,891.0   | 306.0                   | 100.0                        |  | 167  |
| Total, Ontario             |             |                         |                              |  |             |                         |                              |  |  |
| Land and Buildings.....    | 1,419,363.8 | 68.0                    | 56.0                         |  | 2,572,302.7 | 138.0                   | 69.0                         |  | 203  |
| Machinery and Equipment..  | 445,277.5   | 21.0                    | 17.0                         |  | 579,281.7   | 31.0                    | 15.0                         |  | 148  |
| Livestock and Poultry..... | 683,328.3   | 33.0                    | 27.0                         |  | 590,011.6   | 32.0                    | 16.0                         |  | 97   |
| Total, Ontario.....        | 2,547,969.6 | 122.0                   | 100.0                        |  | 3,741,596.0 | 201.0                   | 100.0                        |  | 165  |

# MAJOR ASPECTS OF FARM MECHANIZATION, COUNTIES, LAKE ST. CLAIR REGION, 1961 AND 1966

## AGRICULTURE

|                     | Year             | Area of<br>Improved<br>Acres<br>(000's) | No. of<br>Tractors | Acres<br>Per<br>Tractor | Acres of<br>Combinable<br>Crops <sup>(1)</sup><br>(000's) | No. of<br>Grain<br>Combines | Acres<br>Per<br>Combine | Acres<br>of<br>Hay<br>(000's) | No. of<br>Pick-up<br>Hay Balers | Acres<br>Per<br>Baler |
|---------------------|------------------|---|--------------------|-------------------------|---|-----------------------------|-------------------------|-------------------------------|---------------------------------|-----------------------|
| <b>A—Border</b>     |                  |   |                    |                         |   |                             |                         |                               |                                 |                       |
| Essex.....          | 1961             | 351                                     | 7,703              | 45.6                    | 91  | 1,469                       | 61.9                    | 30                            | 429                             | 69.9                  |
|                     | 1966             | 345                                     | 8,063              | 42.8                    | 70  | 1,191                       | 58.8                    | 20                            | 482                             | 41.5                  |
|                     | % change 1966/61 | -1.7                                    | +4.7               | -6.1                    | -23.1   | -18.9                       | -5.0                    | -33.3                         | +12.4                           | -40.6                 |
|                     |                  |   |                    |                         |   |                             |                         |                               |                                 |                       |
| Kent.....           | 1961             | 498                                     | 8,715              | 57.1                    | 162   | 2,235                       | 72.5                    | 25                            | 591                             | 42.3                  |
|                     | 1966             | 515                                     | 9,133              | 56.4                    | 105   | 1,988                       | 52.8                    | 18                            | 675                             | 26.7                  |
|                     | % change 1966/61 | +3.4                                    | +4.8               | -1.2                    | -35.2   | -11.1                       | -27.2                   | -28.0                         | +14.2                           | -36.9                 |
|                     |                  |   |                    |                         |   |                             |                         |                               |                                 |                       |
| Sub-total.....      | 1961             | 849                                     | 16,418             | 51.7                    | 253   | 3,704                       | 68.3                    | 55                            | 1,020                           | 53.9                  |
|                     | 1966             | 860                                     | 17,196             | 50.0                    | 175   | 3,179                       | 55.0                    | 38                            | 1,157                           | 32.8                  |
|                     | % change 1966/61 | +1.3                                    | +4.7               | -3.3                    | -30.8   | -14.2                       | -19.5                   | -31.0                         | +13.4                           | -39.1                 |
| <b>B—Lambton</b>    |                  |   |                    |                         |   |                             |                         |                               |                                 |                       |
| Lambton.....        | 1961             | 477                                     | 5,856              | 81.5                    | 137   | 1,479                       | 92.6                    | 68                            | 645                             | 105.4                 |
|                     | 1966             | 496                                     | 6,671              | 74.4                    | 118   | 1,512                       | 78.0                    | 68                            | 904                             | 75.2                  |
|                     | % change 1966/61 | +4.0                                    | +13.9              | -8.7                    | -13.9   | +2.2                        | -15.8                   | —                             | +40.2                           | -28.7                 |
|                     |                  |   |                    |                         |   |                             |                         |                               |                                 |                       |
| Total, Region.....  | 1961             | 1,326                                   | 22,274             | 59.5                    | 390   | 5,183                       | 75.2                    | 123                           | 1,665                           | 73.9                  |
|                     | 1966             | 1,356                                   | 23,867             | 56.8                    | 293   | 4,691                       | 62.5                    | 106                           | 2,061                           | 51.4                  |
|                     | % change 1966/61 | +2.3                                    | +7.2               | -4.5                    | -24.9   | -9.5                        | -16.9                   | -13.8                         | +23.8                           | -30.4                 |
|                     |                  |   |                    |                         |   |                             |                         |                               |                                 |                       |
| Total, Ontario..... | 1961             | 12,033                                  | 150,046            | 80.2                    | 3,324   | 22,387                      | 148.5                   | 3,281                         | 28,061                          | 116.9                 |
|                     | 1966             | 12,004                                  | 162,303            | 74.0                    | 3,282   | 25,372                      | 129.4                   | 3,418                         | 38,201                          | 89.5                  |
|                     | % change 1966/61 | -0.2                                    | +8.2               | -7.7                    | -1.3  | +13.3                       | -12.9                   | +4.2                          | +36.1                           | -23.4                 |

(1) Excludes grain corn

# MINING

## MINERAL PRODUCTION, LAKE ST. CLAIR REGION, 1961 TO 1965

|                                      | 1961       |             |              | 1962       |            |              |
|--------------------------------------|------------|-------------|--------------|------------|------------|--------------|
|                                      | Ontario    | Region      | % of Ontario | Ontario    | Region     | % of Ontario |
| Total Value of Production. (\$000's) | 943,669    | 22,041      | 2.3          | 913,342    | 24,168     | 2.6          |
| Non-Metallics. (\$000's)             | 23,630     | 8,848       | 37.4         | 27,321     | 9,292      | 34.0         |
| Salt. tons                           | 2,861,705  | 2,224,647   | 77.7         | 3,155,589  | 2,257,941  | 71.6         |
| (\$000's)                            | 13,586     | 8,848       | 65.1         | 15,388     | 9,292      | 60.4         |
| Fuels. (\$000's)                     | 9,161      | 6,275       | 68.5         | 9,464      | 6,580      | 69.5         |
| Natural Gas. M. cu. ft.              | 14,544,165 | 11,218,213  | 77.1         | 15,648,294 | 12,007,618 | 76.7         |
| (\$000's)                            | 5,614      | 4,330       | 77.1         | 5,802      | 4,452      | 76.7         |
| Petroleum. bbls.                     | 1,149,087  | 629,925     | 54.8         | 1,134,534  | 659,444    | 58.1         |
| (\$000's)                            | 3,547      | 1,944       | 54.8         | 3,661      | 2,128      | 58.1         |
| Structural Materials. (\$000's)      | 130,093    | 6,918       | 5.3          | 146,788    | 8,295      | 5.7          |
| Clay Products. *                     | *          | *           | *            | *          | *          | *            |
| (\$000's)                            | 19,037     | 1,263       | 6.6          | 20,147     | 1,178      | 5.8          |
| Lime. tons                           | 865,130    | 227,750     | 26.3         | 910,930    | 242,844    | 26.7         |
| (\$000's)                            | 11,548     | 3,145       | 27.2         | 10,528     | 2,031      | 19.3         |
| Sand & Gravel. tons                  | 70,208,199 | 2,557,062   | 3.6          | 76,600,813 | 4,799,044  | 6.3          |
| (\$000's)                            | 40,344     | 1,585       | 3.9          | 52,365     | 4,237      | 8.1          |
| Stone. tons                          | 18,361,843 | 1,181,220** | 6.4          | 17,279,797 | 836,176**  | 4.8          |
| (\$000's)                            | 23,493     | 925         | 3.9          | 19,892     | 849        | 4.3          |

\*No common measure.

\*\*Only limestone produced in Region.

| 1963       |            |                 | 1964       |            |                 | 1965       |             |                 |
|------------|------------|-----------------|------------|------------|-----------------|------------|-------------|-----------------|
| Ontario    | Region     | % of<br>Ontario | Ontario    | Region     | % of<br>Ontario | Ontario    | Region      | % of<br>Ontario |
| 873,828    | 23,766     | 2.7             | 901,583    | 22,149     | 2.5             | 992,789    | 23,750      | 2.4             |
| 26,926     | 8,572      | 31.8            | 21,473     | 8,768      | 40.8            | 23,088     | 9,507       | 41.2            |
| 3,187,491  | 2,303,659  | 72.3            | 3,335,683  | 2,472,105  | 74.1            | 3,900,484  | 2,650,759   | 68.0            |
| 14,793     | 8,572      | 57.9            | 11,553     | 8,768      | 75.9            | 15,499     | 9,507       | 61.3            |
| 9,509      | 6,727      | 70.7            | 9,774      | 6,740      | 69.0            | 8,949      | 5,507       | 61.5            |
| 15,920,055 | 11,971,642 | 75.2            | 13,815,967 | 10,323,952 | 74.7            | 12,699,483 | 9,067,228   | 71.4            |
| 6,050      | 4,549      | 75.2            | 5,760      | 4,304      | 74.7            | 4,856      | 3,467       | 71.4            |
| 1,205,376  | 758,664    | 62.9            | 1,246,682  | 756,379    | 60.7            | 1,279,162  | 637,562     | 49.8            |
| 3,459      | 2,177      | 62.9            | 4,014      | 2,436      | 60.7            | 4,093      | 2,040       | 49.8            |
| 154,218    | 8,467      | 5.5             | 169,063    | 6,642      | 3.9             | 184,719    | 8,736       | 4.7             |
| .          | .          | .               | .          | .          | .               | .          | .           | .               |
| 21,820     | 1,248      | 5.7             | 23,724     | 1,302      | 5.5             | 25,131     | 1,358       | 5.4             |
| 952,945    | 268,336    | 28.2            | 1,049,798  | 284,169    | 27.1            | 1,132,193  | 277,064     | 24.5            |
| 11,434     | 2,658      | 23.2            | 13,128     | 2,806      | 21.4            | 13,842     | 2,745       | 19.8            |
| 80,259,750 | 4,927,663  | 6.1             | 76,917,396 | 2,581,362  | 3.4             | 88,564,687 | 4,504,447   | 5.1             |
| 56,338     | 3,796      | 6.7             | 54,589     | 1,641      | 3.0             | 63,406     | 3,267       | 5.2             |
| 19,205,898 | 695,106**  | 3.6             | 22,217,344 | 761,663**  | 3.4             | 24,659,053 | 1,030,012** | 4.2             |
| 20,544     | 765        | 3.7             | 25,243     | 892        | 3.5             | 32,285     | 1,366       | 4.2             |

# ENERGY

## ELECTRIC ENERGY CONSUMED BY AND REVENUE RECEIVED FROM ULTIMATE CUSTOMERS IN THE LAKE ST. CLAIR REGION, SERVED DIRECTLY OR INDIRECTLY BY THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO, 1951, 1961 TO 1966

|   | 1951   | 1961           | 1962           | 1963           | 1964           | 1965           | 1966           | Increase<br>1966/1951<br>% |
|---|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|
|   | — — — — — millions of kilowatt hours — — — — — |                |                |                |                |                |                |                            |
| <b>A—Border</b>   |  |                |                |                |                |                |                |                            |
| <b>Primary</b>  |  |                |                |                |                |                |                |                            |
| Domestic (Incl. residential type<br>and summer cottage) . . . . . | 187.9  | 337.5          | 357.1          | 377.5          | 408.4          | 457.9          | 491.0          | 161.3                      |
| Farm . . . . .  | 43.7   | 72.4           | 77.3           | 85.0           | 85.2           | 91.3           | 96.8           | 121.5                      |
| Commercial . . . . .  | 90.1   | 155.8          | 167.1          | 180.9          | 198.5          | 219.6          | 265.5          | 194.6                      |
| Power (Incl. direct industrial) . . . . .                         | 278.9  | 323.6          | 355.6          | 402.4          | 460.5          | 554.6          | 628.0          | 125.2                      |
| Street Lighting . . . . .   | 9.6  | 19.7           | 20.8           | 22.0           | 23.1           | 24.0           | 24.7           | 157.3                      |
| Total . . . . .   | 610.2  | 909.0          | 977.9          | 1,067.8        | 1,175.7        | 1,347.4        | 1,506.0        | 146.8                      |
| <b>Secondary</b> . . . . .  | —  | —              | —              | —              | —              | —              | —              | —                          |
| <b>Other</b> . . . . .  | —  | —              | —              | —              | —              | —              | —              | —                          |
| Total Primary,<br>Secondary and Other . . . . .                   | 610.2  | 909.0          | 977.9          | 1,067.8        | 1,175.7        | 1,347.4        | 1,506.0        | 146.8                      |
| <b>B—Lambton</b>  |  |                |                |                |                |                |                |                            |
| <b>Primary</b>  |  |                |                |                |                |                |                |                            |
| Domestic (Incl. residential type<br>and summer cottage) . . . . . | 42.8   | 93.0           | 97.9           | 101.3          | 109.7          | 117.0          | 133.2          | 211.2                      |
| Farm . . . . .  | 11.6   | 24.9           | 26.8           | 30.2           | 30.9           | 33.7           | 34.5           | 197.4                      |
| Commercial . . . . .  | 16.3   | 40.0           | 43.6           | 51.0           | 56.3           | 63.2           | 69.5           | 326.4                      |
| Power (Incl. direct industrial) . . . . .                         | 231.1  | 1,041.4        | 1,027.8        | 1,145.8        | 993.4          | 1,142.1        | 1,496.5        | 547.6                      |
| Street Lighting . . . . .   | 1.4  | 3.8            | 4.0            | 4.3            | 4.5            | 4.8            | 5.2            | 271.4                      |
| Total . . . . .   | 303.2  | 1,203.1        | 1,200.1        | 1,332.6        | 1,194.8        | 1,360.8        | 1,738.9        | 473.5                      |
| <b>Secondary</b> . . . . .  | —  | —              | —              | —              | —              | —              | —              | —                          |
| <b>Other</b> . . . . .  | —  | —              | —              | —              | —              | —              | —              | —                          |
| Total Primary,<br>Secondary and Other . . . . .                   | 303.2  | 1,203.1        | 1,200.1        | 1,332.6        | 1,194.8        | 1,360.8        | 1,738.9        | 473.5                      |
| <b>Total, Region</b> . . . . .                                    | <b>913.4</b>                                   | <b>2,112.1</b> | <b>2,178.0</b> | <b>2,400.4</b> | <b>2,370.5</b> | <b>2,708.2</b> | <b>3,244.9</b> | <b>255.3</b>               |



| 1951                                     | 1961          | 1962          | 1963          | 1964          | 1965          | 1966          | Increase<br>1966/1951<br>% |
|--|---------------|---------------|---------------|---------------|---------------|---------------|----------------------------|
| — — — — — thousands of dollars — — — — — |               |               |               |               |               |               |                            |
| 2,751                                    | 5,112         | 5,312         | 5,531         | 5,856         | 6,391         | 6,901         | 150.9                      |
| 873                                      | 1,414         | 1,464         | 1,561         | 1,554         | 1,634         | 1,708         | 95.6                       |
| 1,453                                    | 2,491         | 2,621         | 2,788         | 3,005         | 3,278         | 3,677         | 153.1                      |
| 2,496                                    | 3,834         | 4,028         | 4,341         | 4,797         | 5,574         | 5,959         | 138.7                      |
| 254                                      | 566           | 620           | 669           | 686           | 720           | 738           | 190.6                      |
| 7,827                                    | 13,417        | 14,045        | 14,890        | 15,898        | 17,597        | 18,983        | 142.5                      |
| —  | —             | —             | —             | —             | —             | —             |                            |
| —  | 1             | 2             | 1             | 2             | 1             | 1             |                            |
| 7,827                                    | 13,418        | 14,047        | 14,891        | 15,900        | 17,598        | 18,984        | 142.5                      |
| 708                                      | 1,390         | 1,465         | 1,572         | 1,727         | 1,842         | 1,980         | 179.7                      |
| 238                                      | 488           | 514           | 554           | 564           | 602           | 612           | 157.1                      |
| 286                                      | 632           | 687           | 814           | 923           | 1,028         | 1,082         | 278.3                      |
| 1,452                                    | 6,323         | 6,195         | 7,207         | 6,571         | 7,546         | 9,122         | 528.2                      |
| 46                                       | 104           | 117           | 123           | 131           | 139           | 156           | 239.1                      |
| 2,730                                    | 8,937         | 8,978         | 10,270        | 9,916         | 11,157        | 12,952        | 374.4                      |
| —  | —             | —             | —             | —             | —             | —             |                            |
| —  | —             | 3             | 2             | —             | 1             | 2             |                            |
| 2,730                                    | 8,937         | 8,981         | 10,272        | 9,916         | 11,156        | 12,954        | 374.5                      |
| <b>10,557</b>                            | <b>22,355</b> | <b>23,028</b> | <b>25,163</b> | <b>25,816</b> | <b>28,754</b> | <b>31,938</b> | <b>202.5</b>               |

# MANUFACTURING

## MANUFACTURING STATISTICS, COUNTIES, LAKE ST. CLAIR REGION, 1957 TO 1962

|                    |      | Establish-<br>ments<br>No. | Employees<br>No. | Salaries<br>and Wages<br>(\$'000's) | Selling<br>Value of<br>Factory<br>Shipments<br>(\$'000's) |
|--------------------|------|----------------------------|------------------|-------------------------------------|---|
| Essex.....         | 1957 | 474                        | 34,702           | 140,662                             | 637,991   |
|                    | 1958 | 471                        | 27,850           | 122,459                             | 547,576   |
|                    | 1959 | 452                        | 28,721           | 135,718                             | 575,240   |
|                    | 1960 | 487                        | 27,808           | 134,133                             | 609,167   |
|                    | 1961 | 469                        | 26,060           | 129,121                             | 560,290   |
|                    | 1962 | 484                        | 26,758           | 137,692                             | 617,644   |
| Kent.....          | 1957 | 195                        | 6,936            | 24,673                              | 139,034   |
|                    | 1958 | 193                        | 6,804            | 24,503                              | 139,576   |
|                    | 1959 | 189                        | 6,987            | 26,323                              | 162,960   |
|                    | 1960 | 201                        | 6,979            | 26,751                              | 158,771   |
|                    | 1961 | 179                        | 6,355            | 25,415                              | 160,536   |
|                    | 1962 | 189                        | 7,000            | 28,822                              | 162,544   |
| Lambton.....       | 1957 | 134                        | 9,155            | 42,745                              | 427,752   |
|                    | 1958 | 128                        | 8,900            | 43,405                              | 439,636   |
|                    | 1959 | 129                        | 8,608            | 44,459                              | 400,037   |
|                    | 1960 | 135                        | 9,011            | 48,189                              | 427,388   |
|                    | 1961 | 130                        | 8,899            | 48,656                              | 448,054   |
|                    | 1962 | 126                        | 9,493            | 54,141                              | 478,518   |
| Total, Region..... | 1957 | 803                        | 50,793           | 208,080                             | 1,204,777   |
|                    | 1958 | 792                        | 43,554           | 190,367                             | 1,126,788   |
|                    | 1959 | 770                        | 44,316           | 206,500                             | 1,138,237   |
|                    | 1960 | 823                        | 43,798           | 209,073                             | 1,195,326   |
|                    | 1961 | 778                        | 41,314           | 203,192                             | 1,168,880   |
|                    | 1962 | 799                        | 43,251           | 220,655                             | 1,258,706   |

## PRINCIPAL STATISTICS OF MANUFACTURING, BY INDUSTRIAL GROUPS, LAKE ST. CLAIR REGION, 1957

|  | Establishments<br>No. | Employees<br>No. | Salaries<br>and Wages<br>(\$000's) | Cost of Fuel<br>and<br>Electricity<br>(\$000's) | Cost at Plant<br>of<br>Materials Used<br>(\$000's) | Total Selected<br>Production<br>Cost<br>(\$000's) | Selling Value<br>of Factory<br>Shipments<br>(\$000's) |
|--|-----------------------|------------------|------------------------------------|---|--|---|---|
| Foods and Beverages.....                           | 233                   | 7,888            | 26,004                             | 3,034   | 90,065   | 119,103   | 173,662   |
| Tobacco Products.....                              | 7                     | 448              | 1,340                              | 91  | 17,938   | 19,369  | 20,315  |
| Textile.....                                       | 17                    | 343              | 1,066                              | 45  | 1,949  | 3,060   | 3,739   |
| Clothing.....                                      | 10                    | 295              | 653                                | 14  | 926  | 1,593   | 1,998   |
| Wood.....  | 58                    | 522              | 1,394                              | 103   | 1,761  | 3,258   | 4,045   |
| Furniture and Fixtures.....                        | 43                    | 197              | 585                                | 42  | 1,333  | 1,960   | 2,285   |
| Printing, Publishing<br>and Allied Industries..... | 77                    | 1,121            | 4,236                              | 122   | 2,762  | 7,120   | 10,380  |
| Primary Metals.....                                | 20                    | 1,591            | 5,934                              | 433   | 6,187  | 12,554  | 15,110  |
| Metal Fabricating.....                             | 115                   | 5,328            | 22,447                             | 1,272   | 33,363   | 57,082  | 74,534  |
| Machinery.....                                     | 20                    | 1,185            | 5,042                              | 130   | 7,870  | 13,042  | 18,903  |
| Transportation Equipment.....                      | 43                    | 20,868           | 88,994                             | 4,017   | 263,952  | 356,963   | 407,675   |
| Non-Metallic Mineral Products.....                 | 51                    | 2,383            | 8,866                              | 2,207   | 12,326   | 23,399  | 35,779  |
| Petroleum and Coal Products.....                   | 3                     | 2,276            | 11,985                             | 906   | 165,415  | 178,306   | 200,934   |
| Chemical and Chemical Products...                  | 42                    | 5,319            | 25,584                             | 11,650  | 64,921   | 102,155   | 153,570   |
| Miscellaneous Manufacturing.....                   | 50                    | 599              | 2,214                              | 138   | 3,154  | 5,506   | 7,611   |
| Other Major Groups.....                            | 14                    | 430              | 1,735                              | 10,427  | 3,645  | 15,807  | 74,237  |
| <b>Total, All Groups.....</b>                      | <b>803</b>            | <b>50,793</b>    | <b>208,080</b>                     | <b>34,631</b>                                   | <b>677,569</b>                                     | <b>920,280</b>                                    | <b>1,204,777</b>                                      |
| Total, Ontario.....                                | 12,162                | 636,162          | 2,410,286                          | 221,536   | 5,732,215  | 8,364,036   | 10,811,118  |

Note: Due to rounding, figures may not add to totals.

## PRINCIPAL STATISTICS OF MANUFACTURING, BY INDUSTRIAL GROUPS, LAKE ST. CLAIR REGION, 1958

|  | Establishments<br>No. | Employees<br>No. | Salaries<br>and Wages<br>(\$'000's) | Cost of Fuel<br>and<br>Electricity<br>(\$'000's) | Cost at Plant<br>of<br>Materials Used<br>(\$'000's) | Total Selected<br>Production<br>Cost<br>(\$'000's) | Selling Value<br>of Factory<br>Shipments<br>(\$'000's) |
|--|-----------------------|------------------|-------------------------------------|--|---|--|--|
| Foods and Beverages.....                           | 236                   | 8,223            | 28,566                              | 3,406  | 105,222   | 137,194  | 194,735  |
| Tobacco Products.....                              | 7                     | 764              | 2,037                               | 104  | 34,787  | 36,928   | 38,664   |
| Textile.....                                       | 14                    | 157              | 397                                 | 13   | 1,267   | 1,677  | 1,850  |
| Clothing.....                                      | 10                    | 278              | 656                                 | 12   | 928   | 1,596  | 1,996  |
| Wood.....  | 55                    | 484              | 1,361                               | 107  | 1,887   | 3,355  | 4,076  |
| Furniture and Fixtures.....                        | 36                    | 169              | 520                                 | 27   | 1,334   | 1,881  | 2,268  |
| Printing, Publishing<br>and Allied Industries..... | 77                    | 1,146            | 4,404                               | 112  | 2,797   | 7,313  | 10,833   |
| Primary Metals.....                                | 20                    | 1,284            | 4,837                               | 426  | 4,891   | 10,154   | 13,205   |
| Metal Fabricating.....                             | 118                   | 4,604            | 19,859                              | 1,059  | 29,766  | 50,684   | 66,392   |
| Machinery.....                                     | 19                    | 889              | 3,834                               | 109  | 5,038   | 8,981  | 14,338   |
| Transportation Equipment.....                      | 43                    | 14,902           | 73,034                              | 3,438  | 187,863   | 264,335  | 299,106  |
| Electrical Products.....                           | 7                     | 190              | 727                                 | 47   | 1,476   | 2,250  | 2,720  |
| Non-Metallic Mineral Products.....                 | 47                    | 2,207            | 8,506                               | 2,509  | 10,106  | 21,121   | 31,414   |
| Petroleum and Coal Products.....                   | 3                     | 2,075            | 11,454                              | 1,290  | 171,518   | 184,262  | 205,134  |
| Chemical and Chemical Products..                   | 37                    | 5,113            | 26,112                              | 15,274   | 68,152  | 109,538  | 158,881  |
| Miscellaneous Manufacturing.....                   | 53                    | 602              | 2,297                               | 135  | 3,194   | 5,626  | 7,726  |
| Other Major Groups.....                            | 10                    | 467              | 1,766                               | 11,008   | 4,025   | 16,799   | 73,448   |
| <b>Total, All Groups.....</b>                      | <b>792</b>            | <b>43,554</b>    | <b>190,367</b>                      | <b>39,077</b>                                    | <b>634,251</b>                                      | <b>863,695</b>                                     | <b>1,126,788</b>                                       |
| Total, Ontario.....                                | 11,857                | 599,969          | 2,397,703                           | 215,499  | 5,624,613   | 8,237,813  | 10,579,486   |

Note: Due to rounding, figures may not add to totals.

## PRINCIPAL STATISTICS OF MANUFACTURING, BY INDUSTRIAL GROUPS, LAKE ST. CLAIR REGION, 1959

|  | Establishments<br>No. | Employees<br>No. | Salaries<br>and Wages<br>(\$'000's) | Cost of Fuel<br>and<br>Electricity<br>(\$'000's) | Cost at Plant<br>of<br>Materials Used<br>(\$'000's) | Total Selected<br>Production<br>Cost<br>(\$'000's) | Selling Value<br>of Factory<br>Shipments<br>(\$'000's) |
|--|-----------------------|------------------|-------------------------------------|--|---|--|--|
| Foods and Beverages.....                           | 227                   | 7,917            | 29,314                              | 3,351  | 99,370  | 132,035  | 208,039  |
| Tobacco Products.....                              | 7                     | 863              | 2,237                               | 106  | 34,409  | 36,752   | 38,651   |
| Textile.....                                       | 14                    | 155              | 421                                 | 13   | 1,145   | 1,579  | 2,020  |
| Clothing.....                                      | 9                     | 277              | 665                                 | 14   | 863   | 1,542  | 2,005  |
| Wood.....  | 50                    | 463              | 1,339                               | 101  | 1,860   | 3,300  | 4,031  |
| Furniture and Fixtures.....                        | 37                    | 183              | 623                                 | 28   | 1,685   | 2,336  | 2,719  |
| Printing, Publishing<br>and Allied Industries..... | 76                    | 1,135            | 4,690                               | 117  | 2,976   | 7,784  | 11,617   |
| Primary Metals.....                                | 19                    | 1,329            | 5,626                               | 480  | 6,896   | 13,002   | 16,619   |
| Metal Fabricating.....                             | 118                   | 4,695            | 21,354                              | 1,113  | 28,280  | 50,747   | 67,075   |
| Machinery.....                                     | 18                    | 887              | 3,806                               | 115  | 5,962   | 9,883  | 14,889   |
| Transportation Equipment.....                      | 42                    | 16,266           | 85,386                              | 3,908  | 196,666   | 285,960  | 331,801  |
| Electrical Products.....                           | 8                     | 403              | 1,588                               | 61   | 2,820   | 4,469  | 6,567  |
| Non-Metallic Mineral Products.....                 | 48                    | 2,294            | 9,514                               | 2,609  | 11,650  | 23,773   | 35,267   |
| Petroleum and Coal Products.....                   | 3                     | 1,940            | 11,609                              | 1,085  | 181,715   | 194,409  | 217,313  |
| Chemical and Chemical Products...                  | 38                    | 4,700            | 25,033                              | 15,938   | 69,393  | 110,364  | 156,391  |
| Miscellaneous Manufacturing.....                   | 48                    | 673              | 2,818                               | 143  | 3,154   | 6,115  | 8,856  |
| Other Major Groups.....                            | 8                     | 136              | 476                                 | 11,822   | 971   | 13,269   | 14,374   |
| <b>Total, All Groups.....</b>                      | <b>770</b>            | <b>44,316</b>    | <b>206,500</b>                      | <b>41,004</b>                                    | <b>649,815</b>                                      | <b>897,319</b>                                     | <b>1,138,237</b>                                       |
| Total, Ontario.....                                | 11,728                | 608,802          | 2,544,679                           | 232,026  | 6,096,982   | 8,873,687  | 11,438,365   |

Note: Due to rounding, figures may not add to totals.



# MANUFACTURING

## PRINCIPAL STATISTICS OF MANUFACTURING, BY INDUSTRIAL GROUPS, LAKE ST. CLAIR REGION, 1960

|  | Establishments<br>No. | Employees<br>No. | Salaries<br>and Wages<br>(\$'000's) | Cost of Fuel<br>and<br>Electricity<br>(\$'000's) | Cost at Plant<br>of<br>Materials Used<br>(\$'000's) | Total Selected<br>Production<br>Cost<br>(\$'000's) | Selling Value<br>of Factory<br>Shipments<br>(\$'000's) |
|--|-----------------------|------------------|-------------------------------------|--|---|--|--|
| Foods and Beverages.....                           | 238                   | 8,175            | 30,797                              | 3,241  | 111,163   | 145,201  | 224,058  |
| Tobacco Products.....                              | 7                     | 850              | 2,570                               | 100  | 39,626  | 42,296   | 43,807   |
| Leather.....                                       | 3                     | 3                | 4                                   | 1  | 7   | 12   | 13   |
| Textile.....                                       | 14                    | 161              | 444                                 | 12   | 1,460   | 1,916  | 2,260  |
| Clothing.....                                      | 8                     | 262              | 634                                 | 12   | 814   | 1,460  | 1,868  |
| Wood.....  | 52                    | 419              | 1,294                               | 98   | 1,676   | 3,068  | 3,872  |
| Furniture and Fixtures.....                        | 44                    | 191              | 647                                 | 28   | 1,529   | 2,204  | 2,728  |
| Paper and Allied Industries.....                   | 3                     | 70               | 237                                 | 14   | 415   | 666  | 1,019  |
| Printing, Publishing<br>and Allied Industries..... | 78                    | 1,133            | 4,861                               | 118  | 2,983   | 7,962  | 11,790   |
| Primary Metals.....                                | 19                    | 1,204            | 4,934                               | 465  | 5,598   | 10,997   | 13,871   |
| Metal Fabricating.....                             | 127                   | 4,505            | 20,614                              | 1,189  | 27,367  | 49,170   | 65,787   |
| Machinery.....                                     | 19                    | 839              | 3,932                               | 129  | 6,616   | 10,677   | 15,309   |
| Transportation Equipment.....                      | 44                    | 15,005           | 80,737                              | 3,800  | 215,458   | 299,995  | 346,363  |
| Electrical Products.....                           | 9                     | 186              | 783                                 | 29   | 1,263   | 2,075  | 2,442  |
| Non-Metallic Mineral Products.....                 | 50                    | 2,198            | 9,017                               | 1,970  | 10,285  | 21,272   | 30,162   |
| Petroleum and Coal Products.....                   | 3                     | 1,968            | 11,784                              | 1,089  | 172,930   | 185,803  | 225,343  |
| Chemical and Chemical Products..                   | 39                    | 5,388            | 30,163                              | 18,952   | 75,813  | 124,928  | 177,100  |
| Miscellaneous Manufacturing.....                   | 61                    | 723              | 3,023                               | 149  | 3,146   | 6,318  | 9,371  |
| Other Major Groups.....                            | 5                     | 518              | 2,597                               | 9,967  | 4,936   | 17,500   | 18,161   |
| <b>Total, All Groups.....</b>                      | <b>823</b>            | <b>43,798</b>    | <b>209,073</b>                      | <b>41,364</b>                                    | <b>683,088</b>                                      | <b>933,525</b>                                     | <b>1,195,326</b>                                       |
| Total, Ontario.....                                | 12,090                | 594,319          | 2,557,397                           | 235,718  | 6,031,928   | 8,825,043  | 11,479,327   |

Note: Due to rounding, figures may not add to totals.

## PRINCIPAL STATISTICS OF MANUFACTURING, BY INDUSTRIAL GROUPS, LAKE ST. CLAIR REGION, 1961

|  | Establishments<br>No. | Employees<br>No. | Salaries<br>and Wages<br>(\$'000's) | Cost of Fuel<br>and<br>Electricity<br>(\$'000's) | Cost at Plant<br>of<br>Materials Used<br>(\$'000's) | Total Production<br>Cost<br>(\$'000's) | Selling Value<br>of Factory<br>Shipments<br>(\$'000's) |
|--|-----------------------|------------------|-------------------------------------|--|---|--|--|
| Foods and Beverages.....                           | 208                   | 7,756            | 30,510                              | 3,328  | 112,075   | 145,913                                | 221,903  |
| Tobacco Products.....                              | 6                     | 659              | 2,227                               | 104  | 34,212  | 36,543                                 | 49,217   |
| Leather.....                                       | 3                     | 3                | 3                                   | *  | 7   | 10                                     | 13   |
| Textile.....                                       | 15                    | 130              | 352                                 | 12   | 1,660   | 2,024                                  | 2,390  |
| Clothing.....                                      | 7                     | 265              | 570                                 | 11   | 996   | 1,577                                  | 1,856  |
| Wood.....  | 37                    | 351              | 1,044                               | 67   | 1,297   | 2,408                                  | 3,162  |
| Furniture and Fixtures.....                        | 45                    | 187              | 628                                 | 31   | 1,496   | 2,155                                  | 2,646  |
| Paper and Allied Industries.....                   | 5                     | 90               | 291                                 | 12   | 677   | 980                                    | 1,188  |
| Printing, Publishing<br>and Allied Industries..... | 77                    | 1,122            | 4,879                               | 117  | 3,087   | 8,083                                  | 12,123   |
| Primary Metals.....                                | 17                    | 1,115            | 4,882                               | 468  | 5,072   | 10,422                                 | 13,100   |
| Metal Fabricating.....                             | 133                   | 4,280            | 20,356                              | 1,186  | 29,018  | 50,560                                 | 61,948   |
| Machinery.....                                     | 19                    | 847              | 4,036                               | 132  | 7,246   | 11,414                                 | 16,746   |
| Transportation Equipment.....                      | 43                    | 14,184           | 77,721                              | 3,826  | 192,313   | 273,860                                | 308,286  |
| Electrical Products.....                           | 11                    | 212              | 768                                 | 32   | 1,442   | 2,242                                  | 3,025  |
| Non-Metallic Mineral Products.....                 | 44                    | 1,987            | 8,561                               | 1,736  | 9,611   | 19,908                                 | 27,090   |
| Petroleum and Coal Products.....                   | 3                     | 1,916            | 11,579                              | 1,177  | 176,347   | 189,103                                | 238,484  |
| Chemical and Chemical Products..                   | 43                    | 5,415            | 31,397                              | 17,301   | 76,795  | 125,493                                | 195,630  |
| Miscellaneous Manufacturing.....                   | 59                    | 775              | 3,318                               | 159  | 3,834   | 7,311                                  | 9,871  |
| Other Major Groups.....                            | 3                     | 20               | 70                                  | 5  | 100   | 175                                    | 204  |
| <b>Total, All Groups.....</b>                      | <b>778</b>            | <b>41,314</b>    | <b>203,192</b>                      | <b>29,704</b>                                    | <b>657,285</b>                                      | <b>890,181</b>                         | <b>1,168,880</b>                                       |
| Total, Ontario.....                                | 12,081                | 591,415          | 2,597,408                           | 236,709  | 6,337,293   | 9,171,410                              | 11,957,330   |

\*Less than \$500 or .05 per cent.

Note: Due to rounding, figures may not add to totals.

## PRINCIPAL STATISTICS OF MANUFACTURING, BY INDUSTRIAL GROUPS, LAKE ST. CLAIR REGION, 1962

|  | Establishments<br>No. | Employees<br>No. | Salaries<br>and Wages<br>(\$'000's) | Cost of Fuel<br>and<br>Electricity<br>(\$'000's) | Cost at Plant<br>of<br>Materials Used<br>(\$'000's) | Total Selected<br>Production<br>Cost<br>(\$'000's) | Selling Value<br>of Factory<br>Shipments<br>(\$'000's) |
|--|-----------------------|------------------|-------------------------------------|--|---|--|--|
| Foods and Beverages.....                           | 204                   | 8,742            | 35,956                              | 3,819  | 125,778   | 165,553  | 242,170  |
| Tobacco Products.....                              | 6                     | 740              | 2,045                               | 94   | 26,607  | 28,746   | 33,199   |
| Leather.....                                       | 3                     | —                | —                                   | —  | 9   | 9  | 17   |
| Textile.....                                       | 13                    | 123              | 311                                 | 11   | 1,566   | 1,888  | 2,312  |
| Clothing.....                                      | 7                     | 278              | 635                                 | 11   | 1,185   | 1,831  | 2,115  |
| Wood.....  | 36                    | 415              | 1,265                               | 74   | 1,712   | 3,051  | 4,002  |
| Furniture and Fixtures.....                        | 53                    | 194              | 678                                 | 46   | 1,785   | 2,509  | 3,216  |
| Printing, Publishing<br>and Allied Industries..... | 81                    | 1,072            | 4,925                               | 125  | 3,365   | 8,415  | 12,600   |
| Primary Metals.....                                | 18                    | 1,093            | 5,033                               | 475  | 6,122   | 11,630   | 13,923   |
| Metal Fabricating.....                             | 146                   | 4,802            | 23,527                              | 1,384  | 34,776  | 59,687   | 73,792   |
| Machinery.....                                     | 21                    | 974              | 4,403                               | 132  | 10,250  | 14,785   | 18,359   |
| Transportation Equipment.....                      | 46                    | 13,840           | 80,367                              | 3,888  | 221,561   | 305,816  | 347,849  |
| Electrical Products.....                           | 11                    | 198              | 864                                 | 31   | 2,045   | 2,940  | 3,538  |
| Non-Metallic Mineral Products.....                 | 43                    | 2,203            | 9,837                               | 1,769  | 11,656  | 23,262   | 33,774   |
| Petroleum and Coal Products.....                   | 3                     | 1,894            | 12,011                              | 1,250  | 198,694   | 211,955  | 253,454  |
| Chemical and Chemical Products..                   | 42                    | 5,937            | 35,937                              | 17,147   | 77,277  | 130,361  | 204,199  |
| Miscellaneous Manufacturing.....                   | 58                    | 637              | 2,488                               | 139  | 3,736   | 6,363  | 8,740  |
| Other Major Groups.....                            | 8                     | 109              | 373                                 | 25   | 829   | 1,227  | 1,448  |
| <b>Total, Region.....</b>                          | <b>799</b>            | <b>43,251</b>    | <b>220,655</b>                      | <b>30,421</b>                                    | <b>728,954</b>                                      | <b>980,030</b>                                     | <b>1,258,706</b>                                       |
| Total, Ontario.....                                | 12,586                | 455,872          | 3,078,766                           | 249,458  | 7,176,221   | 10,504,445   | 13,342,557   |

**PERCENTAGE DISTRIBUTION OF TOTAL SELECTED PRODUCTION COST, INDUSTRIAL GROUPS,  
LAKE ST. CLAIR REGION, 1957 TO 1962**

|  | 1957             |                                    |                              |   | 1958             |                                    |                              |   | 1959             |                                    |                              |   |
|--|------------------|------------------------------------|------------------------------|---|------------------|------------------------------------|------------------------------|---|------------------|------------------------------------|------------------------------|---|
|  | Total<br>Payroll | Cost of<br>Fuel and<br>Electricity | Cost of<br>Materials<br>Used | Total<br>Selected<br>Production<br>Cost | Total<br>Payroll | Cost of<br>Fuel and<br>Electricity | Cost of<br>Materials<br>Used | Total<br>Selected<br>Production<br>Cost | Total<br>Payroll | Cost of<br>Fuel and<br>Electricity | Cost of<br>Materials<br>Used | Total<br>Selected<br>Production<br>Cost |
|  |                  |                                    |                              |   |                  |                                    |                              |   |                  |                                    |                              |   |
| Foods and Beverages.....   | 21.8             | 2.5                                | 75.7                         | 100.0                                   | 20.8             | 2.5                                | 76.7                         | 100.0                                   | 22.2             | 2.5                                | 75.3                         | 100.0                                   |
| Tobacco Products.....  | 6.9              | 0.5                                | 92.6                         | 100.0                                   | 5.5              | 0.3                                | 94.2                         | 100.0                                   | 6.1              | 0.3                                | 93.6                         | 100.0                                   |
| Leather .....  | —                | —                                  | —                            | —                                       | —                | —                                  | —                            | —                                       | —                | —                                  | —                            | —                                       |
| Textile .....  | 34.8             | 1.5                                | 63.7                         | 100.0                                   | 23.7             | 0.8                                | 75.5                         | 100.0                                   | 26.7             | 0.8                                | 72.5                         | 100.0                                   |
| Clothing .....   | 41.0             | 0.9                                | 58.1                         | 100.0                                   | 41.1             | 0.8                                | 58.1                         | 100.0                                   | 43.1             | 0.9                                | 56.0                         | 100.0                                   |
| Wood .....   | 42.8             | 3.2                                | 54.0                         | 100.0                                   | 40.6             | 3.2                                | 56.2                         | 100.0                                   | 40.6             | 3.1                                | 56.3                         | 100.0                                   |
| Furniture and Fixtures.....  | 29.9             | 2.1                                | 68.0                         | 100.0                                   | 27.7             | 1.4                                | 70.9                         | 100.0                                   | 26.7             | 1.2                                | 72.1                         | 100.0                                   |
| Paper and Allied Industries,<br>Printing, Publishing<br>and Allied Industries..... | —                | —                                  | —                            | —                                       | —                | —                                  | —                            | —                                       | —                | —                                  | —                            | —                                       |
| Primary Metals.....  | 59.5             | 1.7                                | 38.8                         | 100.0                                   | 60.3             | 1.5                                | 38.2                         | 100.0                                   | 60.3             | 1.5                                | 38.2                         | 100.0                                   |
| Metal Fabricating.....   | 47.3             | 3.4                                | 49.3                         | 100.0                                   | 47.6             | 4.2                                | 48.2                         | 100.0                                   | 43.3             | 3.7                                | 53.0                         | 100.0                                   |
| Machinery .....  | 39.3             | 2.2                                | 58.5                         | 100.0                                   | 39.2             | 2.1                                | 58.7                         | 100.0                                   | 42.1             | 2.2                                | 55.7                         | 100.0                                   |
| Transportation Equipment .....   | 38.7             | 1.0                                | 60.3                         | 100.0                                   | 42.7             | 1.2                                | 56.1                         | 100.0                                   | 38.5             | 1.2                                | 60.3                         | 100.0                                   |
| Electrical Products.....   | 24.9             | 1.1                                | 74.0                         | 100.0                                   | 27.6             | 1.3                                | 71.1                         | 100.0                                   | 29.9             | 1.4                                | 68.7                         | 100.0                                   |
| Non-Metallic<br>Mineral Products.....  | —                | —                                  | —                            | —                                       | 32.3             | 2.1                                | 65.6                         | 100.0                                   | 35.5             | 1.4                                | 63.1                         | 100.0                                   |
| Petroleum<br>and Coal Products.....  | 37.9             | 9.4                                | 52.7                         | 100.0                                   | 40.3             | 11.9                               | 47.8                         | 100.0                                   | 40.0             | 11.0                               | 49.0                         | 100.0                                   |
| Chemical and Chemical<br>Products .....  | 6.7              | 0.5                                | 92.8                         | 100.0                                   | 6.2              | 0.7                                | 93.1                         | 100.0                                   | 6.0              | 0.6                                | 93.4                         | 100.0                                   |
| Miscellaneous<br>Manufacturing .....   | 25.0             | 11.4                               | 63.6                         | 100.0                                   | 23.8             | 13.9                               | 62.3                         | 100.0                                   | 22.7             | 14.4                               | 62.9                         | 100.0                                   |
| Other Major Groups.....  | 40.2             | 2.5                                | 57.3                         | 100.0                                   | 40.8             | 2.4                                | 56.8                         | 100.0                                   | 46.1             | 2.3                                | 51.6                         | 100.0                                   |
| <b>Total, All Groups.....</b>  | <b>11.0</b>      | <b>65.9</b>                        | <b>23.1</b>                  | <b>100.0</b>                            | <b>10.5</b>      | <b>65.5</b>                        | <b>24.0</b>                  | <b>100.0</b>                            | <b>3.6</b>       | <b>89.1</b>                        | <b>7.3</b>                   | <b>100.0</b>                            |
|  | <b>22.6</b>      | <b>3.8</b>                         | <b>73.6</b>                  | <b>100.0</b>                            | <b>22.0</b>      | <b>4.5</b>                         | <b>73.5</b>                  | <b>100.0</b>                            | <b>23.0</b>      | <b>4.6</b>                         | <b>72.4</b>                  | <b>100.0</b>                            |

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MANUFACTURING

## MANUFACTURING

PERCENTAGE DISTRIBUTION OF TOTAL SELECTED PRODUCTION COST, INDUSTRIAL GROUPS,  
LAKE ST. CLAIR REGION, 1957 TO 1962 (CONT'D)

|  | 1960        |                                    |                              |                                | 1961        |                                    |                              |                                | 1962        |                                    |                              |                                |
|--|-------------|------------------------------------|------------------------------|--------------------------------|-------------|------------------------------------|------------------------------|--------------------------------|-------------|------------------------------------|------------------------------|--------------------------------|
|  | Total       |                                    | Total                        |                                | Total       |                                    | Total                        |                                | Total       |                                    | Total                        |                                |
|  | Payroll     | Cost of<br>Fuel and<br>Electricity | Cost of<br>Materials<br>Used | Selected<br>Production<br>Cost | Payroll     | Cost of<br>Fuel and<br>Electricity | Cost of<br>Materials<br>Used | Selected<br>Production<br>Cost | Payroll     | Cost of<br>Fuel and<br>Electricity | Cost of<br>Materials<br>Used | Selected<br>Production<br>Cost |
| Foods and Beverages.....                           | 21.2        | 2.2                                | 76.6                         | 100.0                          | 20.9        | 2.3                                | 76.8                         | 100.0                          | 21.7        | 2.3                                | 76.0                         | 100.0                          |
| Tobacco Products.....                              | 6.1         | 0.2                                | 93.7                         | 100.0                          | 6.1         | 0.3                                | 93.6                         | 100.0                          | 7.1         | 0.3                                | 92.6                         | 100.0                          |
| Leather.....                                       | 35.5        | 4.1                                | 60.4                         | 100.0                          | 31.4        | —                                  | 68.6                         | 100.0                          | —           | —                                  | —                            | —                              |
| Textile.....                                       | 23.2        | 0.6                                | 76.2                         | 100.0                          | 17.4        | 0.6                                | 82.0                         | 100.0                          | 16.5        | 0.6                                | 82.9                         | 100.0                          |
| Clothing.....                                      | 43.4        | 0.8                                | 55.8                         | 100.0                          | 36.1        | 0.7                                | 63.2                         | 100.0                          | 34.7        | 0.6                                | 64.7                         | 100.0                          |
| Wood.....  | 42.2        | 3.2                                | 54.6                         | 100.0                          | 43.4        | 2.8                                | 53.8                         | 100.0                          | 41.5        | 2.4                                | 56.1                         | 100.0                          |
| Furniture and Fixtures.....                        | 29.3        | 1.3                                | 69.4                         | 100.0                          | 29.2        | 1.5                                | 69.3                         | 100.0                          | 27.0        | 1.8                                | 71.2                         | 100.0                          |
| Paper and Allied Industries.                       | 35.5        | 2.1                                | 62.4                         | 100.0                          | 29.7        | 1.3                                | 69.0                         | 100.0                          | —           | —                                  | —                            | —                              |
| Printing, Publishing<br>and Allied Industries..... | 61.0        | 1.5                                | 37.5                         | 100.0                          | 60.4        | 1.4                                | 38.2                         | 100.0                          | 58.5        | 1.5                                | 40.0                         | 100.0                          |
| Primary Metals.....                                | 44.9        | 4.2                                | 50.9                         | 100.0                          | 46.8        | 4.5                                | 48.7                         | 100.0                          | 43.3        | 4.1                                | 52.6                         | 100.0                          |
| Metal Fabricating.....                             | 41.9        | 2.4                                | 55.7                         | 100.0                          | 40.3        | 2.3                                | 57.4                         | 100.0                          | 39.4        | 2.3                                | 58.3                         | 100.0                          |
| Machinery.....                                     | 36.8        | 1.2                                | 62.0                         | 100.0                          | 35.4        | 1.2                                | 63.4                         | 100.0                          | 29.8        | 0.9                                | 69.3                         | 100.0                          |
| Transportation Equipment..                         | 26.9        | 1.3                                | 71.8                         | 100.0                          | 28.4        | 1.4                                | 70.2                         | 100.0                          | 26.3        | 1.3                                | 72.4                         | 100.0                          |
| Electrical Products.....                           | 37.7        | 1.4                                | 60.9                         | 100.0                          | 34.2        | 1.4                                | 64.4                         | 100.0                          | 29.4        | 1.0                                | 69.6                         | 100.0                          |
| Non-Metallic<br>Mineral Products.....              | 42.4        | 9.3                                | 48.3                         | 100.0                          | 43.0        | 8.7                                | 48.3                         | 100.0                          | 42.3        | 7.6                                | 50.1                         | 100.0                          |
| Petroleum<br>and Coal Products.....                | 6.3         | 0.6                                | 93.1                         | 100.0                          | 6.1         | 0.6                                | 93.3                         | 100.0                          | 5.7         | 0.6                                | 93.7                         | 100.0                          |
| Chemical and Chemical<br>Products.....             | 24.1        | 15.2                               | 60.7                         | 100.0                          | 25.0        | 13.8                               | 61.2                         | 100.0                          | 27.6        | 13.2                               | 59.2                         | 100.0                          |
| Miscellaneous<br>Manufacturing.....                | 47.9        | 2.4                                | 49.7                         | 100.0                          | 45.4        | 2.2                                | 52.4                         | 100.0                          | 39.1        | 2.2                                | 58.7                         | 100.0                          |
| Other Major Groups.....                            | 14.8        | 57.0                               | 28.2                         | 100.0                          | 39.9        | 2.9                                | 57.2                         | 100.0                          | 30.4        | 2.0                                | 67.6                         | 100.0                          |
| <b>Total, All Groups.....</b>                      | <b>22.4</b> | <b>4.4</b>                         | <b>73.2</b>                  | <b>100.0</b>                   | <b>22.8</b> | <b>3.3</b>                         | <b>73.9</b>                  | <b>100.0</b>                   | <b>22.5</b> | <b>3.1</b>                         | <b>74.4</b>                  | <b>100.0</b>                   |



**SELECTED PRODUCTION COST AS A PERCENTAGE OF  
SELLING VALUE, LAKE ST. CLAIR REGION,  
MANUFACTURING INDUSTRIAL GROUPS**

|  | 1957        | 1958        | 1959        | 1960        | 1961        | 1962        |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Foods and Beverages.....                           | 68.6        | 70.5        | 63.5        | 64.8        | 65.8        | 68.4        |
| Tobacco Products.....                              | 95.3        | 95.5        | 95.1        | 96.6        | 74.2        | 86.6        |
| Leather.....                                       | —           | —           | —           | —           | 84.6        | 52.9        |
| Textile.....                                       | 81.8        | 90.6        | 78.2        | 84.8        | 84.7        | 81.7        |
| Clothing.....                                      | 79.7        | 80.0        | 76.9        | 78.2        | 85.0        | 86.6        |
| Wood.....  | 80.5        | 82.3        | 81.9        | 79.2        | 76.2        | 76.2        |
| Furniture and Fixtures.....                        | 85.8        | 82.9        | 85.9        | 80.8        | 81.4        | 78.0        |
| Paper and Allied Industries.....                   | —           | —           | —           | 65.4        | 82.5        | —           |
| Printing, Publishing<br>and Allied Industries..... | 68.6        | 67.5        | 67.0        | 67.5        | 66.7        | 66.8        |
| Primary Metals.....                                | 83.1        | 76.9        | 78.2        | 79.3        | 79.6        | 83.5        |
| Metal Fabricating.....                             | 76.6        | 76.3        | 75.7        | 74.7        | 81.6        | 80.9        |
| Machinery.....                                     | 69.0        | 62.6        | 66.4        | 69.7        | 68.2        | 80.5        |
| Transportation Equipment.....                      | 87.6        | 88.4        | 86.2        | 86.6        | 88.8        | 87.9        |
| Electrical Products.....                           | —           | 82.7        | 68.1        | 84.9        | 74.1        | 83.1        |
| Non-Metallic Mineral Products.....                 | 65.4        | 67.2        | 67.4        | 70.5        | 73.5        | 68.9        |
| Petroleum and Coal Products.....                   | 88.7        | 89.8        | 89.5        | 82.5        | 79.3        | 83.6        |
| Chemical and Chemical Products.....                | 66.5        | 68.9        | 70.6        | 70.5        | 64.1        | 63.8        |
| Miscellaneous Manufacturing.....                   | 72.3        | 72.8        | 69.1        | 67.4        | 74.1        | 72.8        |
| Other Major Groups.....                            | 21.3        | 22.8        | 92.3        | 96.4        | 85.8        | 84.7        |
| <b>Total, All Groups.....</b>                      | <b>76.4</b> | <b>76.7</b> | <b>78.8</b> | <b>78.1</b> | <b>76.2</b> | <b>77.9</b> |
| <b>Total, Ontario.....</b>                         | <b>77.4</b> | <b>77.9</b> | <b>77.6</b> | <b>76.9</b> | <b>76.7</b> | <b>78.7</b> |

**VALUE OF FACTORY SHIPMENTS, LAKE ST. CLAIR REGION  
AND ONTARIO BY INDUSTRIAL GROUPS, 1957, 1958 AND 1959**

|  | 1957                |                   |             | 1958                |                   |             | 1959                |                   |             |
|--|---------------------|-------------------|-------------|---------------------|-------------------|-------------|---------------------|-------------------|-------------|
|  | Region              |                   | % of        | Region              |                   | % of        | Region              |                   | % of        |
|  | — — — \$000's — — — | Ontario           | Ontario     | — — — \$000's — — — | Ontario           | Ontario     | — — — \$000's — — — | Ontario           | Ontario     |
| <b>Industrial Group</b>                    |                     |                   |             |                     |                   |             |                     |                   |             |
| Foods and Beverages . . . . .              | 173,662             | 1,702,345         | 10.2        | 194,735             | 1,834,699         | 10.6        | 208,039             | 1,916,303         | 10.9        |
| Tobacco Products . . . . .                 | 20,315              | 80,470            | 25.2        | 38,664              | 131,051           | 29.5        | 38,651              | 140,446           | 27.5        |
| Leather . . . . .                          |                     | 115,522           |             |                     | 122,463           |             |                     | 134,369           | —           |
| Textile . . . . .                          | 3,739               | 299,691           | 1.2         | 1,850               | 283,565           | 0.7         | 2,020               | 312,251           | 0.6         |
| Clothing . . . . .                         | 1,998               | 195,638           | 1.0         | 1,996               | 192,704           | 1.0         | 2,005               | 194,072           | 1.0         |
| Wood . . . . .                             | 4,045               | 171,863           | 2.4         | 4,076               | 166,791           | 2.4         | 4,031               | 181,696           | 2.2         |
| Furniture and Fixtures . . . . .           | 2,285               | 153,502           | 1.5         | 2,268               | 152,511           | 1.5         | 2,719               | 162,194           | 1.7         |
| Paper and Allied Industries . . . . .      |                     | 696,743           |             |                     | 714,731           |             |                     | 739,275           |             |
| Printing, Publishing and Allied Industries | 10,380              | 367,565           | 0.1         | 10,833              | 393,051           | 0.1         | 11,617              | 424,632           | 0.1         |
| Primary Metals . . . . .                   | 15,110              | 1,518,512         | 1.0         | 13,205              | 1,208,816         | 1.1         | 16,619              | 1,557,777         | 1.1         |
| Metal Fabricating . . . . .                | 74,534              | 742,603           | 10.0        | 66,392              | 731,944           | 9.1         | 67,075              | 789,071           | 8.5         |
| Machinery . . . . .                        | 18,903              | 422,998           | 4.5         | 14,338              | 413,041           | 3.5         | 14,889              | 470,867           | 3.2         |
| Transportation Equipment . . . . .         | 407,675             | 1,635,788         | 24.9        | 299,106             | 1,501,590         | 19.9        | 331,801             | 1,471,107         | 22.6        |
| Electrical Products . . . . .              |                     | 832,183           |             | 2,720               | 761,961           | 0.4         | 6,567               | 800,307           | 0.8         |
| Non-Metallic Mineral Products . . . . .    | 35,779              | 288,186           | 12.4        | 31,414              | 298,869           | 10.5        | 35,267              | 324,171           | 10.9        |
| Petroleum and Coal Products . . . . .      | 200,934             | 292,319           | 68.7        | 205,134             | 315,488           | 65.0        | 217,313             | 354,744           | 61.3        |
| Chemical and Chemical Products . . . . .   | 153,570             | 671,525           | 22.9        | 158,881             | 732,216           | 21.7        | 156,391             | 770,887           | 20.3        |
| Miscellaneous Manufacturing . . . . .      | 7,611               | 270,338           | 2.8         | 7,726               | 289,166           | 2.7         | 8,856               | 321,696           | 2.8         |
| Other Major Groups . . . . .               | 74,237              | 353,326           | 21.0        | 73,448              | 334,859           | 21.9        | 14,374              | 372,500           | 3.9         |
| <b>Total, All Groups . . . . .</b>         | <b>1,204,777</b>    | <b>10,811,118</b> | <b>11.1</b> | <b>1,126,788</b>    | <b>10,579,486</b> | <b>10.6</b> | <b>1,138,237</b>    | <b>11,438,365</b> | <b>10.0</b> |

**VALUE OF FACTORY SHIPMENTS, ST. CLAIR REGION  
AND ONTARIO BY INDUSTRIAL GROUPS, 1960, 1961 AND 1962**

| Industrial Group                           | 1960              |                   |                 | 1961              |                   |                 | 1962              |                   |                 |
|--|-------------------|-------------------|-----------------|-------------------|-------------------|-----------------|-------------------|-------------------|-----------------|
|  | Region            | Ontario           | % of<br>Ontario | Region            | Ontario           | % of<br>Ontario | Region            | Ontario           | % of<br>Ontario |
|  | -----\$000's----- | -----\$000's----- |                 | -----\$000's----- | -----\$000's----- |                 | -----\$000's----- | -----\$000's----- |                 |
| Foods and Beverages.....                   | 224,058           | 1,954,959         | 11.5            | 221,903           | 2,034,876         | 10.9            | 242,170           | 2,435,612         | 9.9             |
| Tobacco Products.....                      | 43,807            | 147,814           | 29.6            | 49,217            | 141,471           | 34.8            | 33,199            | 148,620           | 22.3            |
| Leather.....                               | 13                | 126,035           | —               | 13                | 141,458           | —               | 17                | 156,371           | —               |
| Textile.....                               | 2,260             | 310,594           | 0.7             | 2,390             | 331,650           | 0.7             | 2,312             | 395,662           | 0.6             |
| Clothing.....                              | 1,868             | 192,831           | 1.0             | 1,856             | 197,108           | 0.9             | 2,115             | 216,130           | 1.0             |
| Wood.....                                  | 3,872             | 167,309           | 2.3             | 3,162             | 177,380           | 1.8             | 4,002             | 215,334           | 1.9             |
| Furniture and Fixtures.....                | 2,728             | 164,812           | 1.7             | 2,646             | 174,258           | 1.5             | 3,216             | 192,240           | 1.7             |
| Paper and Allied Industries.....           | 1,019             | 769,287           | 0.1             | 1,188             | 787,842           | 0.2             | —                 | 861,713           | —               |
| Printing, Publishing and Allied Industries | 11,790            | 439,109           | 2.7             | 12,123            | 455,059           | 2.7             | 12,600            | 509,593           | 2.5             |
| Primary Metals.....                        | 13,871            | 1,520,197         | 0.9             | 13,100            | 1,624,729         | 0.8             | 13,923            | 1,699,758         | 0.8             |
| Metal Fabricating.....                     | 65,787            | 816,298           | 8.1             | 61,948            | 864,992           | 7.2             | 73,792            | 1,100,155         | 6.7             |
| Machinery.....                             | 15,309            | 476,815           | 3.2             | 16,746            | 485,330           | 3.5             | 18,359            | 746,771           | 2.5             |
| Transportation Equipment.....              | 346,363           | 1,456,230         | 23.8            | 308,286           | 1,414,270         | 21.8            | 347,849           | 2,092,655         | 16.6            |
| Electrical Products.....                   | 2,442             | 778,465           | 0.3             | 3,025             | 830,790           | 0.4             | 3,538             | 1,085,732         | 0.3             |
| Non-Metallic Mineral Products.....         | 30,162            | 316,336           | 9.5             | 27,090            | 324,617           | 8.3             | 33,774            | 421,117           | 8.0             |
| Petroleum and Coal Products.....           | 225,343           | 354,217           | 63.6            | 238,484           | 386,442           | 61.7            | 253,454           | 421,810           | 60.1            |
| Chemical and Chemical Products.....        | 177,100           | 812,531           | 21.8            | 195,630           | 861,064           | 22.7            | 204,199           | 1,072,777         | 19.0            |
| Miscellaneous Manufacturing.....           | 9,371             | 335,034           | 2.8             | 9,871             | 381,389           | 2.6             | 8,740             | 534,041           | 1.6             |
| Other Major Groups.....                    | 18,161            | 340,453           | 5.3             | 204               | 342,604           | —               | 1,448             | 394,942           | 0.4             |
| <b>Total, All Groups.....</b>              | <b>1,195,326</b>  | <b>11,479,327</b> | <b>10.4</b>     | <b>1,168,880</b>  | <b>11,957,330</b> | <b>9.8</b>      | <b>1,258,706</b>  | <b>13,342,557</b> | <b>9.4</b>      |

# MANUFACTURING

## LABOUR FORCE OF INDUSTRIAL GROUPS BY SEX, LAKE ST. CLAIR REGION, 1957 TO 1962

|                  | Foods and<br>Beverages | Tobacco<br>Products | Leather      | Textile        | Clothing       |
|------------------|------------------------|---------------------|--------------|----------------|----------------|
| <b>1957</b>      |                        |                     |              |                |                |
| Total . . . . .  | 7,888<br>(100.0)       | 448<br>(100.0)      | —            | 343<br>(100.0) | 295<br>(100.0) |
| Male . . . . .   | 5,792<br>(73.4)        | 259<br>(57.8)       | —            | 186<br>(54.2)  | 57<br>(19.3)   |
| Female . . . . . | 2,096<br>(26.6)        | 189<br>(42.2)       | —            | 157<br>(45.8)  | 238<br>(80.7)  |
| <b>1958</b>      |                        |                     |              |                |                |
| Total . . . . .  | 8,223<br>(100.0)       | 764<br>(100.0)      | —            | 157<br>(100.0) | 278<br>(100.0) |
| Male . . . . .   | 6,004<br>(73.0)        | 407<br>(53.3)       | —            | 78<br>(49.7)   | 59<br>(21.2)   |
| Female . . . . . | 2,219<br>(27.0)        | 357<br>(46.7)       | —            | 79<br>(50.3)   | 219<br>(78.8)  |
| <b>1959</b>      |                        |                     |              |                |                |
| Total . . . . .  | 7,917<br>(100.0)       | 863<br>(100.0)      | —            | 155<br>(100.0) | 277<br>(100.0) |
| Male . . . . .   | 5,856<br>(74.0)        | 507<br>(58.7)       | —            | 75<br>(48.4)   | 41<br>(14.8)   |
| Female . . . . . | 2,061<br>(26.0)        | 356<br>(41.3)       | —            | 80<br>(51.6)   | 236<br>(85.2)  |
| <b>1960</b>      |                        |                     |              |                |                |
| Total . . . . .  | 8,175<br>(100.0)       | 850<br>(100.0)      | 3<br>(100.0) | 161<br>(100.0) | 262<br>(100.0) |
| Male . . . . .   | 5,920<br>(72.4)        | 523<br>(61.5)       | 3<br>(100.0) | 74<br>(46.0)   | 46<br>(17.6)   |
| Female . . . . . | 2,255<br>(27.6)        | 327<br>(38.5)       | —<br>( — )   | 87<br>(54.0)   | 216<br>(82.4)  |
| <b>1961</b>      |                        |                     |              |                |                |
| Total . . . . .  | 7,756<br>(100.0)       | 659<br>(100.0)      | 3<br>(100.0) | 130<br>(100.0) | 265<br>(100.0) |
| Male . . . . .   | 5,596<br>(72.2)        | 486<br>(73.7)       | 3<br>(100.0) | 50<br>(38.5)   | 35<br>(13.2)   |
| Female . . . . . | 2,160<br>(27.8)        | 173<br>(26.3)       | —<br>( — )   | 80<br>(61.5)   | 230<br>(86.8)  |
| <b>1962</b>      |                        |                     |              |                |                |
| Total . . . . .  | 8,742<br>(100.0)       | 740<br>(100.0)      | —            | 123<br>(100.0) | 278<br>(100.0) |
| Male . . . . .   | 6,338<br>(72.5)        | 554<br>(74.9)       | —            | 40<br>(32.5)   | 35<br>(12.6)   |
| Female . . . . . | 2,404<br>(27.5)        | 186<br>(25.1)       | —            | 83<br>(67.5)   | 243<br>(87.4)  |

# MANUFACTURING

| Wood    | Furniture and Fixtures | Paper and Allied Industries | Printing, Publishing, and Allied Industries | Primary Metals | Metal Fabricating |
|---------|------------------------|-----------------------------|---|----------------|-------------------|
| 522     | 197                    | —                           | 1,121                                       | 1,591          | 5,328             |
| (100.0) | (100.0)                | —                           | (100.0)                                     | (100.0)        | (100.0)           |
| 487     | 170                    | —                           | 850   | 1,492          | 4,826             |
| (93.3)  | (86.3)                 | —                           | (75.8)                                      | (93.8)         | (90.6)            |
| 35      | 27                     | —                           | 271   | 99             | 502               |
| (6.7)   | (13.7)                 | —                           | (24.2)                                      | (6.2)          | (9.4)             |
| 484     | 169                    | —                           | 1,146                                       | 1,284          | 4,604             |
| (100.0) | (100.0)                | —                           | (100.0)                                     | (100.0)        | (100.0)           |
| 456     | 143                    | —                           | 831   | 1,213          | 4,096             |
| (94.2)  | (84.6)                 | —                           | (72.5)                                      | (94.5)         | (89.0)            |
| 28      | 26                     | —                           | 315   | 71             | 508               |
| (5.8)   | (15.4)                 | —                           | (27.5)                                      | (5.5)          | (11.0)            |
| 463     | 183                    | —                           | 1,135                                       | 1,329          | 4,695             |
| (100.0) | (100.0)                | —                           | (100.0)                                     | (100.0)        | (100.0)           |
| 435     | 150                    | —                           | 825   | 1,276          | 4,245             |
| (94.0)  | (82.0)                 | —                           | (72.7)                                      | (96.0)         | (90.4)            |
| 28      | 33                     | —                           | 310   | 53             | 450               |
| (6.0)   | (18.0)                 | —                           | (27.3)                                      | (4.0)          | (9.6)             |
| 419     | 191                    | 70                          | 1,133                                       | 1,204          | 4,505             |
| (100.0) | (100.0)                | (100.0)                     | (100.0)                                     | (100.0)        | (100.0)           |
| 396     | 159                    | 42                          | 824   | 1,144          | 4,069             |
| (94.5)  | (83.2)                 | (60.0)                      | (72.7)                                      | (95.0)         | (90.3)            |
| 23      | 32                     | 28                          | 309   | 60             | 436               |
| (5.5)   | (16.8)                 | (40.0)                      | (27.3)                                      | (5.0)          | (9.7)             |
| 351     | 187                    | 90                          | 1,122                                       | 1,115          | 4,280             |
| (100.0) | (100.0)                | (100.0)                     | (100.0)                                     | (100.0)        | (100.0)           |
| 317     | 155                    | 65                          | 821   | 1,048          | 3,867             |
| (90.3)  | (82.9)                 | (72.2)                      | (73.2)                                      | (94.0)         | (90.4)            |
| 34      | 32                     | 25                          | 301   | 67             | 413               |
| (9.7)   | (17.1)                 | (27.8)                      | (26.8)                                      | (6.0)          | (9.6)             |
| 415     | 194                    | —                           | 1,072                                       | 1,093          | 4,802             |
| (100.0) | (100.0)                | —                           | (100.0)                                     | (100.0)        | (100.0)           |
| 376     | 148                    | —                           | 790   | 1,035          | 4,310             |
| (90.6)  | (76.3)                 | —                           | (73.7)                                      | (94.7)         | (89.8)            |
| 39      | 46                     | —                           | 282   | 58             | 492               |
| (9.4)   | (23.7)                 | —                           | (26.3)                                      | (5.3)          | (10.2)            |

(cont'd next page)



# MANUFACTURING

## LABOUR FORCE OF INDUSTRIAL GROUPS BY SEX, LAKE ST. CLAIR REGION, 1957 TO 1962 (CONT'D)

|                  | Machinery        | Transportation<br>Equipment | Electrical<br>Products | Non-Metallic<br>Mineral<br>Products |
|------------------|------------------|-----------------------------|------------------------|-------------------------------------|
| <b>1957</b>      |                  |                             |                        |                                     |
| Total . . . . .  | 1,185<br>(100.0) | 20,868<br>(100.0)           | —                      | 2,383<br>(100.0)                    |
| Male . . . . .   | 911<br>(76.9)    | 18,906<br>(90.6)            | —                      | 2,230<br>(93.6)                     |
| Female . . . . . | 274<br>(23.1)    | 1,962<br>(9.4)              | —                      | 153<br>(6.4)                        |
| <b>1958</b>      |                  |                             |                        |                                     |
| Total . . . . .  | 889<br>(100.0)   | 14,902<br>(100.0)           | 190<br>(100.0)         | 2,207<br>(100.0)                    |
| Male . . . . .   | 683<br>(76.8)    | 13,443<br>(90.2)            | 143<br>(75.3)          | 2,056<br>(93.2)                     |
| Female . . . . . | 206<br>(23.2)    | 1,459<br>(9.8)              | 47<br>(24.7)           | 151<br>(6.8)                        |
| <b>1959</b>      |                  |                             |                        |                                     |
| Total . . . . .  | 887<br>(100.0)   | 16,266<br>(100.0)           | 403<br>(100.0)         | 2,294<br>(100.0)                    |
| Male . . . . .   | 699<br>(78.8)    | 14,701<br>(90.4)            | 285<br>(70.7)          | 2,147<br>(93.6)                     |
| Female . . . . . | 188<br>(21.2)    | 1,565<br>(9.6)              | 118<br>(29.3)          | 147<br>(6.4)                        |
| <b>1960</b>      |                  |                             |                        |                                     |
| Total . . . . .  | 839<br>(100.0)   | 15,005<br>(100.0)           | 186<br>(100.0)         | 2,198<br>(100.0)                    |
| Male . . . . .   | 654<br>(77.9)    | 13,764<br>(91.7)            | 160<br>(86.0)          | 2,045<br>(93.0)                     |
| Female . . . . . | 185<br>(22.1)    | 1,241<br>(8.3)              | 26<br>(14.0)           | 153<br>(7.0)                        |
| <b>1961</b>      |                  |                             |                        |                                     |
| Total . . . . .  | 847<br>(100.0)   | 14,184<br>(100.0)           | 212<br>(100.0)         | 1,987<br>(100.0)                    |
| Male . . . . .   | 650<br>(76.7)    | 12,955<br>(91.3)            | 163<br>(76.9)          | 1,836<br>(92.4)                     |
| Female . . . . . | 197<br>(23.3)    | 1,229<br>(8.7)              | 49<br>(23.1)           | 151<br>(7.6)                        |
| <b>1962</b>      |                  |                             |                        |                                     |
| Total . . . . .  | 974<br>(100.0)   | 13,840<br>(100.0)           | 198<br>(100.0)         | 2,203<br>(100.0)                    |
| Male . . . . .   | 780<br>(80.1)    | 12,712<br>(91.8)            | 157<br>(79.3)          | 2,036<br>(92.4)                     |
| Female . . . . . | 194<br>(19.9)    | 1,128<br>(8.2)              | 41<br>(20.7)           | 167<br>(7.6)                        |

# MANUFACTURING

| Petroleum<br>and Coal<br>Products | Chemical<br>and Chemical<br>Products | Miscellaneous<br>Manufacturing | Other Major<br>Groups | Total,<br>All Groups | Total,<br>Ontario |
|-----------------------------------|--------------------------------------|--------------------------------|-----------------------|----------------------|-------------------|
| 2,276<br>(100.0)                  | 5,319<br>(100.0)                     | 599<br>(100.0)                 | 430<br>(100.0)        | 50,793<br>(100.0)    | 636,162           |
| 2,146<br>(94.3)                   | 4,521<br>(85.0)                      | 460<br>(76.8)                  | 325<br>(75.6)         | 43,618<br>(85.9)     |                   |
| 130<br>(5.7)                      | 798<br>(15.0)                        | 139<br>(23.2)                  | 105<br>(24.4)         | 7,175<br>(14.1)      |                   |
| 2,075<br>(100.0)                  | 5,113<br>(100.0)                     | 602<br>(100.0)                 | 467<br>(100.0)        | 43,554<br>(100.0)    | 599,969           |
| 1,947<br>(93.8)                   | 4,571<br>(89.4)                      | 458<br>(76.1)                  | 265<br>(56.7)         | 36,853<br>(84.6)     |                   |
| 128<br>(6.2)                      | 542<br>(10.6)                        | 144<br>(23.9)                  | 202<br>(43.3)         | 6,701<br>(15.4)      |                   |
| 1,940<br>(100.0)                  | 4,700<br>(100.0)                     | 673<br>(100.0)                 | 136<br>(100.0)        | 44,316<br>(100.0)    | 608,802           |
| 1,819<br>(93.8)                   | 4,120<br>(87.7)                      | 513<br>(76.2)                  | 94<br>(69.1)          | 37,788<br>(85.3)     |                   |
| 121<br>(6.2)                      | 580<br>(12.3)                        | 160<br>(23.8)                  | 42<br>(30.9)          | 6,528<br>(14.7)      |                   |
| 1,968<br>(100.0)                  | 5,388<br>(100.0)                     | 723<br>(100.0)                 | 518<br>(100.0)        | 43,798<br>(100.0)    | 594,319           |
| 1,849<br>(94.0)                   | 4,820<br>(89.5)                      | 565<br>(78.1)                  | 343<br>(66.2)         | 37,400<br>(85.4)     |                   |
| 119<br>(6.0)                      | 568<br>(10.5)                        | 158<br>(21.9)                  | 175<br>(33.8)         | 6,398<br>(14.6)      |                   |
| 1,916<br>(100.0)                  | 5,415<br>(100.0)                     | 775<br>(100.0)                 | 20<br>(100.0)         | 41,314<br>(100.0)    | 591,415           |
| 1,809<br>(94.4)                   | 4,901<br>(90.5)                      | 612<br>(79.0)                  | 11<br>(55.0)          | 35,380<br>(85.6)     |                   |
| 107<br>(5.6)                      | 514<br>(9.5)                         | 163<br>(21.0)                  | 9<br>(45.0)           | 5,934<br>(14.4)      |                   |
| 1,894<br>(100.0)                  | 5,937<br>(100.0)                     | 637<br>(100.0)                 | 109<br>(100.0)        | 43,251<br>(100.0)    | 455,872           |
| 1,792<br>(94.6)                   | 5,325<br>(89.7)                      | 444<br>(69.7)                  | 78<br>(71.6)          | 36,950<br>(85.4)     |                   |
| 102<br>(5.4)                      | 612<br>(10.3)                        | 193<br>(30.3)                  | 31<br>(28.4)          | 6,301<br>(14.6)      |                   |

# TRANSPORTATION AND COMMUNICATIONS

## CARGOES LOADED AND UNLOADED AT SPECIFIED PORTS, LAKE ST. CLAIR REGION, 1963 AND 1964

|   | 1963                           |                     |         |
|---|--------------------------------|---------------------|---------|
|   | Cargoes<br>Loaded              | Cargoes<br>Unloaded | Total   |
|   | — — — — — Cargo Tons — — — — — |                     |         |
| <b>Essex County</b>                     |                                |                     |         |
| <b>Amherstburg</b>                      |                                |                     |         |
| Chemical n.e.s. . . . .                 | 5,000                          |                     | 5,000   |
| <b>Kingsville</b>                       |                                |                     |         |
| Fish, Fresh or Frozen . . . . .         |                                | 4                   | 4       |
| Gasoline . . . . .                      | 703                            |                     | 703     |
| Fuel Oil . . . . .                      | 674                            |                     | 674     |
| Lubricating Oil, Grease . . . . .       | 103                            |                     | 103     |
| General Cargo . . . . .                 | 396                            | 231                 | 627     |
| Total . . . . .                         | 1,876                          | 235                 | 2,111   |
| <b>Leamington</b>                       |                                |                     |         |
| Wheat Flour . . . . .                   |                                | 30                  | 30      |
| Cereals Milled n.e.s. . . . .           |                                | 30                  | 30      |
| Vegetables Fresh, Frozen n.e.s. . . . . | 44                             |                     | 44      |
| Food Preparations n.e.s. . . . .        | 42,066                         | 413                 | 42,479  |
| Tobacco . . . . .                       | 1,009                          | 58                  | 1,067   |
| Newsprint Paper . . . . .               |                                | 48                  | 48      |
| Gasoline . . . . .                      | 17                             |                     | 17      |
| Lubricating Oil, Grease . . . . .       | 19                             |                     | 19      |
| Asphalt . . . . .                       |                                | 37                  | 37      |
| Metal Fab. Products n.e.s. . . . .      |                                | 44                  | 44      |
| Containers, Empty . . . . .             |                                | 240                 | 240     |
| Containers n.e.s. . . . .               |                                | 360                 | 360     |
| General Cargo . . . . .                 | 1,948                          | 1,080               | 3,028   |
| Total . . . . .                         | 45,103                         | 2,340               | 47,443  |
| <b>Pelee Island</b>                     |                                |                     |         |
| Fish, Fresh or Frozen . . . . .         | 3                              |                     | 3       |
| Wheat . . . . .                         | 1,650                          |                     | 1,650   |
| Soybeans . . . . .                      | 3,150                          |                     | 3,150   |
| Sand and Gravel . . . . .               |                                | 1,137               | 1,137   |
| Gasoline . . . . .                      | 17                             | 703                 | 720     |
| Fuel Oil . . . . .                      | 38                             | 720                 | 758     |
| Lubricating Oil, Grease . . . . .       |                                | 38                  | 38      |
| General Cargo . . . . .                 | 673                            | 1,412               | 2,085   |
| Total . . . . .                         | 5,531                          | 4,010               | 9,541   |
| <b>Point Pelee</b>                      |                                |                     |         |
| Sand and Gravel . . . . .               | 13,105                         |                     | 13,105  |
| <b>Walkerville</b>                      |                                |                     |         |
| Barley . . . . .                        |                                | 4,169               | 4,169   |
| Corn . . . . .                          | 5,071                          |                     | 5,071   |
| Rye . . . . .                           | 3,714                          |                     | 3,714   |
| Wheat . . . . .                         |                                | 46,963              | 46,963  |
| Malt . . . . .                          |                                | 879                 | 879     |
| Soybeans . . . . .                      | 7,669                          |                     | 7,669   |
| Dolomite . . . . .                      |                                | 2,246               | 2,246   |
| Gasoline . . . . .                      |                                | 75,146              | 75,146  |
| Fuel Oil . . . . .                      |                                | 25,655              | 25,655  |
| Total . . . . .                         | 16,454                         | 155,058             | 171,512 |

# TRANSPORTATION AND COMMUNICATIONS

|                                  | 1964                           |          |         |
|----------------------------------|--------------------------------|----------|---------|
|                                  | Cargoes                        | Cargoes  | Total   |
|                                  | Loaded                         | Unloaded |         |
|                                  | — — — — — Cargo Tons — — — — — |          |         |
| <b>Essex County</b>              |                                |          |         |
| <b>Amherstburg</b>               |                                |          |         |
| Chemical n.e.s. . . . .          | 41,568                         |          | 41,568  |
| General Cargo . . . . .          | 90                             |          | 90      |
| Total . . . . .                  | 41,658                         |          | 41,658  |
| <b>Kingsville</b>                |                                |          |         |
| Chemical n.e.s. . . . .          | 2                              |          | 2       |
| Gasoline . . . . .               | 790                            |          | 790     |
| Fuel Oil . . . . .               | 857                            |          | 857     |
| Cement . . . . .                 | 6                              |          | 6       |
| General Cargo . . . . .          | 690                            | 412      | 1,102   |
| Total . . . . .                  | 2,345                          | 412      | 2,757   |
| <b>Leamington</b>                |                                |          |         |
| Food Preparations n.e.s. . . . . | 362                            |          | 362     |
| Tobacco . . . . .                | 60                             |          | 60      |
| Lumber and timber . . . . .      |                                | 21       | 21      |
| Veneer and Plywood . . . . .     |                                | 1        | 1       |
| Newsprint Paper . . . . .        |                                | 43       | 43      |
| Containers n.e.s. . . . .        | 15                             |          | 15      |
| General Cargo . . . . .          | 2,401                          | 1,922    | 4,323   |
| Total . . . . .                  | 2,838                          | 1,987    | 4,825   |
| <b>Pelee Island</b>              |                                |          |         |
| Wheat . . . . .                  | 2,500                          |          | 2,500   |
| Soybeans . . . . .               | 3,575                          |          | 3,575   |
| Dolomite . . . . .               |                                | 2,552    | 2,552   |
| Chemical n.e.s. . . . .          |                                | 2        | 2       |
| Gasoline . . . . .               |                                | 790      | 790     |
| Fuel Oil . . . . .               |                                | 857      | 857     |
| Cement . . . . .                 |                                | 6        | 6       |
| General Cargo . . . . .          | 643                            | 1,495    | 2,138   |
| Total . . . . .                  | 6,718                          | 5,702    | 12,420  |
| <b>Point Pelee</b>               |                                |          |         |
| Sand and Gravel . . . . .        | 15,374                         |          | 15,374  |
| <b>Walkerville</b>               |                                |          |         |
| Corn . . . . .                   | 7,700                          |          | 7,700   |
| Wheat . . . . .                  | 18,196                         | 14,856   | 33,052  |
| Malt . . . . .                   |                                | 3,950    | 3,950   |
| Soybeans . . . . .               | 3,540                          |          | 3,540   |
| Dolomite . . . . .               |                                | 27,338   | 27,338  |
| Sand and Gravel . . . . .        |                                | 5,451    | 5,451   |
| Limestone . . . . .              |                                | 3,660    | 3,660   |
| Crushed Stone . . . . .          | 1,922                          |          | 1,922   |
| Gasoline . . . . .               |                                | 72,125   | 72,125  |
| Fuel Oil . . . . .               |                                | 33,058   | 33,058  |
| Total . . . . .                  | 31,358                         | 160,438  | 191,796 |

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# TRANSPORTATION AND COMMUNICATIONS

## CARGOES LOADED AND UNLOADED AT SPECIFIED PORTS, LAKE ST. CLAIR REGION, 1963 AND 1964 (CONT'D)

|                                 | 1963              |                     |         |
|---------------------------------|-------------------|---------------------|---------|
|                                 | Cargoes<br>Loaded | Cargoes<br>Unloaded | Total   |
|                                 | — Cargo Tons —    |                     |         |
| <b>Windsor</b>                  |                   |                     |         |
| Dairy Produce, Eggs, n.e.s.     | 17                |                     | 17      |
| Cereals Unmilled n.e.s.         |                   | 11                  | 11      |
| Malt.                           | 60                |                     | 60      |
| Wheat Flour.                    | 576               |                     | 576     |
| Vegetables Fresh, Frozen n.e.s. | 64                |                     | 64      |
| Vegetable Preparations, n.e.s.  |                   | 15                  | 15      |
| Sugar.                          |                   | 930                 | 930     |
| Spices.                         |                   | 8                   | 8       |
| Food Preparations, n.e.s.       | 22,814            | 1,816               | 24,630  |
| Wines.                          |                   | 19                  | 19      |
| Distilled Alcoholic Bev.        | 4,497             | 529                 | 5,026   |
| Crude Veg. Material, n.e.s.     |                   | 127                 | 127     |
| Textile Fibres, n.e.s.          |                   | 30                  | 30      |
| Metallic Ores and Conc. n.e.s.  | 23                |                     | 23      |
| Asbestos Unmilled.              |                   | 16                  | 16      |
| Dolomite.                       |                   | 46,322              | 46,322  |
| Limestone.                      |                   | 9,635               | 9,635   |
| Salt.                           | 99,119            |                     | 99,119  |
| Lumber and Timber.              |                   | 30                  | 30      |
| Sawmill Products, n.e.s.        |                   | 110                 | 110     |
| Veneer and Plywood.             |                   | 20                  | 20      |
| Wood Fab. Materials, n.e.s.     |                   | 197                 | 197     |
| Paper n.e.s.                    | 6                 | 43                  | 49      |
| Paper, Paperboard n.e.s.        |                   | 68                  | 68      |
| Sacking Materials.              |                   | 2,315               | 2,315   |
| Textile Fab. Materials, n.e.s.  |                   | 12                  | 12      |
| Fish, Marine Animal Oil.        |                   | 12                  | 12      |
| Chemicals, n.e.s.               | 37,507            | 14                  | 37,521  |
| Chemical Products, n.e.s.       | 59                |                     | 59      |
| Gasoline.                       |                   | 108,894             | 108,894 |
| Fuel Oil.                       |                   | 87,409              | 87,409  |
| Lubricating Oil, Grease.        | 7                 | 135                 | 142     |
| Ferro-Alloys.                   | 90                |                     | 90      |
| Iron, Steel, Ingot Slab.        | 166               | 21,017              | 21,183  |
| Steel Bar and Rod.              |                   | 2,509               | 2,509   |
| Steel Plate and Sheet.          | 322               | 46,805              | 47,127  |
| Structural Shapes.              | 387               | 10,951              | 11,338  |
| Rails, Track Material.          |                   | 215                 | 215     |
| Iron Steel Pipes n.e.s.         | 10                | 4                   | 14      |
| Iron and Steel n.e.s.           | 141               |                     | 141     |
| Metal Fab. Prods. n.e.s.        | 133               | 104                 | 237     |
| Plate and Sheet Glass.          | 4                 | 297                 | 301     |
| Misc. Fab. Materials, n.e.s.    | 36                | 21                  | 57      |
| Machinery.                      | 7                 | 5,312               | 5,319   |
| Autos and Chassis.              | 1,891             |                     | 1,891   |
| Trucks and Chassis.             |                   | 20                  | 20      |
| Motor Veh. Parts, n.e.s.        | 371               |                     | 371     |
| Motor Vehicles n.e.s.           | 7                 |                     | 7       |
| Misc. Veh. and Parts, n.e.s.    | 22                | 1                   | 23      |
| Misc. Equipment, n.e.s.         | 1                 |                     | 1       |
| Household Goods, n.e.s.         | 33                | 14                  | 47      |
| Containers Empty.               | 25                | 378                 | 403     |



# TRANSPORTATION AND COMMUNICATIONS

|                                      | 1964              |                     |         |
|--------------------------------------|-------------------|---------------------|---------|
|                                      | Cargoes<br>Loaded | Cargoes<br>Unloaded | Total   |
|                                      | — — — —           | — Cargo Tons —      | — — — — |
| <b>Windsor (cont'd)</b>              |                   |                     |         |
| Wheat Flour.....                     | 35                |                     | 35      |
| Apples.....                          | 1                 |                     | 1       |
| Fruits, Dried, Preserved.....        |                   | 15                  | 15      |
| Fruit Preparations, n.e.s.....       |                   | 2                   | 2       |
| Nuts, n.e.s.....                     |                   | 20                  | 20      |
| Veg. Fresh, Frozen, n.e.s.....       | 234               |                     | 234     |
| Veg. Preparations, n.e.s.....        |                   | 579                 | 579     |
| Sugar.....                           | 17                | 1,054               | 1,071   |
| Food Preparations, n.e.s.....        | 72,453            | 4,290               | 76,743  |
| Grain Feeds n.e.s.....               | 47                |                     | 47      |
| Wines.....                           |                   | 23                  | 23      |
| Distilled Alcoholic Bev.....         | 6,542             |                     | 6,542   |
| Tobacco.....                         | 741               | 299                 | 1,040   |
| Crude Veg. Material, n.e.s.....      |                   | 12                  | 12      |
| Textile Fibres, n.e.s.....           |                   | 75                  | 75      |
| Dolomite.....                        |                   | 43,718              | 43,718  |
| Sand and Gravel.....                 |                   | 1,885               | 1,885   |
| Salt.....                            | 94,937            |                     | 94,937  |
| Waste and Scrap, n.e.s.....          |                   | 5,000               | 5,000   |
| Lumber and Timber.....               | 45                | 821                 | 866     |
| Wood Fab. Materials, n.e.s.....      | 1                 |                     | 1       |
| Newsprint Paper.....                 |                   | 1,317               | 1,317   |
| Paper n.e.s.....                     |                   | 577                 | 577     |
| Paperboard.....                      |                   | 34                  | 34      |
| Sacking Materials.....               |                   | 2,207               | 2,207   |
| Textile Fab. Materials, n.e.s.....   |                   | 152                 | 152     |
| Fish, Marine Animal Oil.....         |                   | 13                  | 13      |
| Chemicals, n.e.s.....                | 36,082            | 31                  | 36,113  |
| Chemical Products, n.e.s.....        | 484               | 22                  | 506     |
| Gasoline.....                        |                   | 124,976             | 124,976 |
| Fuel Oil.....                        |                   | 97,387              | 97,387  |
| Lubricating Oil, Grease.....         | 145               | 192                 | 337     |
| Ferro-Alloys.....                    | 56                |                     | 56      |
| Iron, Steel, Ingot Slab.....         | 5                 | 25,262              | 25,267  |
| Steel Bar and Rod.....               | 1,171             | 2,996               | 4,167   |
| Steel Plate and Sheet.....           | 111               | 57,224              | 57,335  |
| Structural Shapes.....               | 1,029             | 16,334              | 17,363  |
| Iron Steel Pipes.....                |                   | 20                  | 20      |
| Iron and Steel n.e.s.....            | 487               |                     | 487     |
| Non-Ferrous Metals, n.e.s.....       | 50                |                     | 50      |
| Metal Fab. Prods., n.e.s.....        |                   | 227                 | 227     |
| Plate and Sheet Glass.....           | 13                | 50                  | 63      |
| Non-Metallic Min. Prods., n.e.s..... |                   | 10                  | 10      |
| Misc. Fab. Materials, n.e.s.....     | 29                | 21                  | 50      |
| Machinery.....                       | 714               | 6,814               | 7,528   |
| Railway Rolling Stock.....           | 36                |                     | 36      |
| Autos and Chassis.....               | 2,379             |                     | 2,379   |
| Trucks and Chassis.....              | 114               | 4                   | 118     |
| Motor Veh. and Parts, n.e.s.....     | 1,904             | 151                 | 2,055   |
| Misc. Veh. and Parts. n.e.s.....     | 2,485             |                     | 2,485   |
| Misc. Equipment, n.e.s.....          | 161               | 7                   | 168     |
| Household Goods, n.e.s.....          | 106               | 62                  | 168     |

(cont'd next page)

# TRANSPORTATION AND COMMUNICATIONS

## CARGOES LOADED AND UNLOADED AT SPECIFIED PORTS, LAKE ST. CLAIR REGION, 1963 AND 1964 (CONT'D)

|                                | 1963                       |                     |                  |
|--------------------------------|----------------------------|---------------------|------------------|
|                                | Cargoes<br>Loaded          | Cargoes<br>Unloaded | Total            |
|                                | — — — — Cargo Tons — — — — |                     |                  |
| <b>Essex County (cont'd)</b>   |                            |                     |                  |
| <b>Windsor (cont'd)</b>        |                            |                     |                  |
| Containers, n.e.s.....         |                            | 340                 | 340              |
| General Cargo.....             | 5,252                      | 802                 | 6,054            |
| Total .....                    | 173,647                    | 347,507             | 521,154          |
| Total, Essex County.....       | 260,716                    | 509,150             | 769,866          |
| <b>Kent County</b>             |                            |                     |                  |
| <b>Erieau</b>                  |                            |                     |                  |
| Dolomite.....                  |                            | 1,900               | 1,900            |
| <b>Wallaceburg</b>             |                            |                     |                  |
| Wheat.....                     | 21,545                     |                     | 21,545           |
| Molasses Crude.....            | 2,470                      |                     | 2,470            |
| Molasses and Syrup, n.e.s..... | 2,750                      |                     | 2,750            |
| Soybeans.....                  | 13,706                     |                     | 13,706           |
| Dolomite.....                  |                            | 9,981               | 9,981            |
| Total .....                    | 40,471                     | 9,981               | 50,452           |
| Total, Kent County.....        | 40,471                     | 11,881              | 52,352           |
| <b>Lambton County</b>          |                            |                     |                  |
| <b>Courtright</b>              |                            |                     |                  |
| Dolomite.....                  |                            | 2,648               | 2,648            |
| <b>Sarnia</b>                  |                            |                     |                  |
| Barley.....                    |                            | 11,789              | 11,789           |
| Oats.....                      |                            | 6,376               | 6,736            |
| Rye.....                       |                            | 839                 | 839              |
| Wheat.....                     | 63,630                     | 88,245              | 151,875          |
| Wheat Flour.....               |                            | 40,458              | 40,458           |
| Food Preparations, n.e.s.....  |                            | 695                 | 695              |
| Grain Feeds, n.e.s.....        |                            | 28,125              | 28,125           |
| Soybeans.....                  | 21,361                     |                     | 21,361           |
| Dolomite.....                  |                            | 1,069               | 1,069            |
| Salt.....                      | 12,600                     |                     | 12,600           |
| Glycol.....                    | 12,950                     |                     | 12,950           |
| Chemical n.e.s.....            | 33,438                     | 37,653              | 71,091           |
| Gasoline.....                  | 600,255                    |                     | 600,255          |
| Fuel Oil.....                  | 1,212,947                  | 31,063              | 1,244,010        |
| Lubricating Oil, Grease.....   | 31,821                     | 98,655              | 130,476          |
| Coke.....                      | 2,000                      |                     | 2,000            |
| Asphalt.....                   | 1,582                      |                     | 1,582            |
| Petrol. Coal Prods. n.e.s..... | 2,100                      |                     | 2,100            |
| Structural Shapes.....         |                            | 27                  | 27               |
| Containers Empty.....          |                            | 89                  | 89               |
| General Cargo.....             | 36,761                     | 10,122              | 46,883           |
| Total .....                    | 2,031,445                  | 355,205             | 2,386,650        |
| Total, Lambton County.....     | 2,031,445                  | 357,853             | 2,389,298        |
| <b>Total, Region.....</b>      | <b>2,332,632</b>           | <b>878,884</b>      | <b>3,211,516</b> |

# TRANSPORTATION AND COMMUNICATIONS

|                               | 1964                       |                     |           |
|-------------------------------|----------------------------|---------------------|-----------|
|                               | Cargoes<br>Loaded          | Cargoes<br>Unloaded | Total     |
|                               | — — — — Cargo Tons — — — — |                     |           |
| Essex County (cont'd)         |                            |                     |           |
| Windsor (cont'd)              |                            |                     |           |
| Containers Empty.....         | 207                        | 492                 | 699       |
| Containers, n.e.s.....        | 371                        | 938                 | 1,309     |
| Misc. Products, n.e.s.....    | 2                          | 33                  | 35        |
| General Cargo.....            | 17,694                     | 6,896               | 24,590    |
| Total.....                    | 240,888                    | 402,242             | 643,130   |
| Total, Essex County.....      | 341,179                    | 570,781             | 911,960   |
| Kent County                   |                            |                     |           |
| Wallaceburg                   |                            |                     |           |
| Corn.....                     | 9,102                      |                     | 9,102     |
| Wheat.....                    | 32,394                     |                     | 32,394    |
| Soybeans.....                 | 3,510                      |                     | 3,510     |
| Dolomite.....                 |                            | 23,109              | 23,109    |
| Total.....                    | 45,006                     | 23,109              | 68,115    |
| Total, Kent County.....       | 45,006                     | 23,109              | 68,115    |
| Lambton County                |                            |                     |           |
| Sarnia                        |                            |                     |           |
| Barley.....                   |                            | 8,433               | 8,433     |
| Oats.....                     |                            | 6,973               | 6,973     |
| Rye.....                      |                            | 8,160               | 8,160     |
| Wheat.....                    | 44,847                     | 150,266             | 195,113   |
| Wheat Flour.....              |                            | 49,330              | 49,330    |
| Grain Feeds, n.e.s.....       |                            | 36,639              | 36,639    |
| Soybeans.....                 | 22,244                     |                     | 22,244    |
| Sand and Gravel.....          |                            | 4,710               | 4,710     |
| Salt.....                     | 9,625                      |                     | 9,625     |
| Lumber and Timber.....        | 51                         | 45                  | 96        |
| Railway Ties.....             |                            | 253                 | 253       |
| Newsprint Paper.....          | 500                        |                     | 500       |
| Glycol.....                   | 7,701                      |                     | 7,701     |
| Chemical n.e.s.....           | 55,186                     | 37,335              | 92,521    |
| Synthetic Rubber.....         | 345                        |                     | 345       |
| Chemical Products, n.e.s..... | 2,700                      | 3,126               | 5,826     |
| Gasoline.....                 | 605,503                    | 8,060               | 613,563   |
| Fuel Oil.....                 | 1,271,362                  | 15,734              | 1,287,096 |
| Lubricating Oil, Grease.....  | 13,855                     | 128,732             | 142,587   |
| Tar, Pitch and Creosote.....  |                            | 756                 | 756       |
| Pig Iron.....                 |                            | 2,247               | 2,247     |
| Autos and Chassis.....        |                            | 12                  | 12        |
| Containers Empty.....         |                            | 268                 | 268       |
| Misc. Products, n.e.s.....    |                            | 2                   | 2         |
| General Cargo.....            | 67,965                     | 9,890               | 77,855    |
| Total.....                    | 2,101,884                  | 470,971             | 2,572,855 |
| Total, Lambton County.....    | 2,101,884                  | 470,971             | 2,572,855 |
| Total, Region.....            | 2,488,069                  | 1,064,861           | 3,552,930 |

# TRANSPORTATION AND COMMUNICATIONS

## NUMBER AND REGISTERED NET TONNAGE OF VESSELS, ARRIVALS AND DEPARTURES, PORTS, LAKE ST. CLAIR REGION, 1962 TO 1964

|                       |      | Coastwise Shipping |           |            |           |            |           |
|-----------------------|------|--------------------|-----------|------------|-----------|------------|-----------|
|                       |      | Arrived            |           | Departed   |           | Total      |           |
|                       |      | Registered         |           | Registered |           | Registered |           |
| Port                  | Year | No.                | Net Tons  | No.        | Net Tons  | No.        | Net Tons  |
| Essex County          |      |                    |           |            |           |            |           |
| Amherstburg .         | 1962 | 25                 | 5,087     | 37         | 10,161    | 62         | 15,248    |
|                       | 1963 | 26                 | 5,674     | 30         | 7,204     | 56         | 12,878    |
|                       | 1964 | 24                 | 28,062    | 22         | 27,609    | 46         | 55,671    |
| Kingsville. . .       | 1962 | 203                | 25,504    | 202        | 25,412    | 405        | 50,916    |
|                       | 1963 | 238                | 31,819    | 242        | 34,576    | 480        | 66,395    |
|                       | 1964 | 283                | 40,805    | 285        | 42,739    | 568        | 83,544    |
| Leamington. .         | 1962 | 614                | 421,133   | 620        | 442,874   | 1,234      | 864,007   |
|                       | 1963 | 536                | 408,561   | 541        | 432,261   | 1,077      | 840,822   |
|                       | 1964 | 418                | 101,871   | 424        | 110,471   | 842        | 212,342   |
| Pelee Island. .       | 1962 | 694                | 87,577    | 694        | 87,577    | 1,388      | 175,154   |
|                       | 1963 | 644                | 88,075    | 645        | 88,280    | 1,289      | 176,355   |
|                       | 1964 | 680                | 87,984    | 679        | 86,151    | 1,359      | 174,135   |
| Point Pelee. .        | 1962 | 8                  | 5,200     | 7          | 4,550     | 15         | 9,750     |
|                       | 1963 | 7                  | 4,550     | 7          | 4,550     | 14         | 9,100     |
|                       | 1964 | 9                  | 5,211     | 9          | 5,211     | 18         | 10,422    |
| Walkerville. .        | 1962 | 60                 | 90,316    | 62         | 102,844   | 122        | 193,160   |
|                       | 1963 | 46                 | 79,381    | 49         | 88,427    | 95         | 167,808   |
|                       | 1964 | 60                 | 97,079    | 69         | 128,608   | 129        | 225,687   |
| Windsor. . . .        | 1962 | 121                | 277,331   | 221        | 519,220   | 342        | 796,551   |
|                       | 1963 | 272                | 716,530   | 330        | 899,785   | 602        | 1,616,315 |
|                       | 1964 | 410                | 1,036,502 | 405        | 1,106,093 | 815        | 2,142,595 |
| Total, Essex. . . . . | 1962 | 1,725              | 912,148   | 1,843      | 1,192,638 | 3,568      | 2,104,786 |
|                       | 1963 | 1,769              | 1,334,590 | 1,844      | 1,555,083 | 3,613      | 2,889,673 |
|                       | 1964 | 1,884              | 1,397,514 | 1,893      | 1,506,882 | 3,777      | 2,904,396 |
| Kent County           |      |                    |           |            |           |            |           |
| Chatham. . . .        | 1962 | 3                  | 202       | 5          | 364       | 8          | 566       |
|                       | 1963 | 2                  | 162       | 2          | 162       | 4          | 324       |
|                       | 1964 |                    |           |            |           |            |           |
| Erieau. . . . .       | 1962 | 21                 | 3,486     | 19         | 3,551     | 40         | 7,037     |
|                       | 1963 | 8                  | 1,364     | 12         | 7,153     | 20         | 8,517     |
|                       | 1964 | 1                  | 11        | 5          | 2,187     | 6          | 2,198     |
| Wallaceburg. .        | 1962 | 12                 | 16,923    | 12         | 15,192    | 24         | 32,115    |
|                       | 1963 | 16                 | 23,692    | 14         | 20,182    | 30         | 43,874    |
|                       | 1964 | 21                 | 29,231    | 17         | 23,065    | 38         | 52,296    |
| Total, Kent. . . . .  | 1962 | 36                 | 20,611    | 36         | 19,107    | 72         | 39,718    |
|                       | 1963 | 26                 | 25,218    | 28         | 27,497    | 54         | 52,715    |
|                       | 1964 | 22                 | 29,242    | 22         | 25,252    | 44         | 54,494    |

# TRANSPORTATION AND COMMUNICATIONS

|                       |      | International Sea Borne |           |            |           |            |           |
|-----------------------|------|-------------------------|-----------|------------|-----------|------------|-----------|
|                       |      | Arrived                 |           | Departed   |           | Total      |           |
|                       |      | Registered              |           | Registered |           | Registered |           |
| Port                  | Year | No.                     | Net Tons  | No.        | Net Tons  | No.        | Net Tons  |
| Essex County          |      |                         |           |            |           |            |           |
| Amherstburg .         | 1962 | 101                     | 175,962   | 96         | 170,803   | 197        | 346,765   |
|                       | 1963 | 47                      | 168,422   | 45         | 166,537   | 92         | 334,959   |
|                       | 1964 | 49                      | 165,354   | 54         | 162,837   | 103        | 328,191   |
| Kingsville. . . .     | 1962 | 23                      | 34,090    | 23         | 33,826    | 46         | 67,916    |
|                       | 1963 | 21                      | 35,216    | 20         | 33,588    | 41         | 68,804    |
|                       | 1964 | 17                      | 31,695    | 16         | 29,862    | 33         | 61,557    |
| Leamington . .        | 1962 | 20                      | 46,478    | 13         | 23,433    | 33         | 69,911    |
|                       | 1963 | 14                      | 41,714    | 7          | 17,857    | 21         | 59,571    |
|                       | 1964 | 8                       | 15,081    | 6          | 7,811     | 14         | 22,892    |
| Pelee Island. .       | 1962 | 183                     | 37,515    | 183        | 37,515    | 366        | 75,030    |
|                       | 1963 | 149                     | 32,111    | 149        | 32,111    | 298        | 64,222    |
|                       | 1964 | 111                     | 26,011    | 112        | 27,844    | 223        | 53,855    |
| Point Pelee. . .      | 1962 | 190                     | 115,474   | 191        | 116,124   | 381        | 231,598   |
|                       | 1963 | 165                     | 116,576   | 165        | 116,576   | 330        | 233,152   |
|                       | 1964 | 208                     | 157,006   | 208        | 157,006   | 416        | 314,012   |
| Walkerville. . .      | 1962 | 51                      | 162,930   | 48         | 149,156   | 99         | 312,086   |
|                       | 1963 | 118                     | 193,051   | 114        | 176,004   | 232        | 369,055   |
|                       | 1964 | 42                      | 165,279   | 35         | 148,088   | 77         | 313,367   |
| Windsor. . . . .      | 1962 | 2,096                   | 1,061,971 | 2,062      | 940,421   | 4,158      | 2,002,392 |
|                       | 1963 | 1,630                   | 1,251,705 | 1,595      | 1,065,827 | 3,225      | 2,317,532 |
|                       | 1964 | 1,598                   | 1,202,054 | 1,589      | 1,101,364 | 3,187      | 2,303,418 |
| Total, Essex. . . . . | 1962 | 2,664                   | 1,634,420 | 2,616      | 1,471,278 | 5,280      | 3,105,698 |
|                       | 1963 | 2,144                   | 1,838,795 | 2,095      | 1,608,500 | 4,239      | 3,447,295 |
|                       | 1964 | 2,033                   | 1,762,480 | 2,020      | 1,634,812 | 4,053      | 3,397,292 |
| Kent County           |      |                         |           |            |           |            |           |
| Chatham. . . . .      | 1962 |                         |           |            |           |            |           |
|                       | 1963 |                         |           |            |           |            |           |
|                       | 1964 |                         |           |            |           |            |           |
| Erieau. . . . .       | 1962 | 47                      | 82,632    | 46         | 80,669    | 93         | 163,301   |
|                       | 1963 | 63                      | 66,534    | 58         | 60,979    | 121        | 127,513   |
|                       | 1964 | 60                      | 120,305   | 60         | 120,305   | 120        | 240,610   |
| Wallaceburg. .        | 1962 | 17                      | 20,504    | 19         | 22,242    | 36         | 42,746    |
|                       | 1963 | 3                       | 4,719     | 5          | 8,229     | 8          | 12,948    |
|                       | 1964 | 7                       | 11,657    | 11         | 17,823    | 18         | 29,480    |
| Total, Kent. . . . .  | 1962 | 64                      | 103,136   | 65         | 102,911   | 129        | 206,047   |
|                       | 1963 | 66                      | 71,253    | 63         | 69,208    | 129        | 140,461   |
|                       | 1964 | 67                      | 131,962   | 71         | 138,128   | 138        | 270,090   |

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# TRANSPORTATION AND COMMUNICATIONS

## NUMBER AND REGISTERED NET TONNAGE OF VESSELS, ARRIVALS AND DEPARTURES, PORTS, LAKE ST. CLAIR REGION, 1962 TO 1964, (CONT'D)

| Port                  |      | Year  |           | Total Coastwise and International Shipping |                        |          |                        |       |                        |
|-----------------------|------|-------|-----------|--|------------------------|----------|------------------------|-------|------------------------|
|                       |      |       |           | Arrived                                    |                        | Departed |                        | Total |                        |
|                       |      |       |           | No.  | Registered<br>Net Tons | No.      | Registered<br>Net Tons | No.   | Registered<br>Net Tons |
| Essex County          |      |       |           |  |                        |          |                        |       |                        |
| Amherstburg .         | 1962 | 126   | 181,049   | 133  | 180,964                | 259      | 362,013                |       |                        |
|                       | 1963 | 73    | 174,096   | 75   | 173,741                | 148      | 347,837                |       |                        |
|                       | 1964 | 73    | 193,416   | 76   | 190,446                | 149      | 383,862                |       |                        |
| Kingsville. . .       | 1962 | 226   | 59,594    | 225  | 59,238                 | 451      | 118,832                |       |                        |
|                       | 1963 | 259   | 67,035    | 262  | 68,164                 | 521      | 135,199                |       |                        |
|                       | 1964 | 300   | 72,500    | 301  | 72,601                 | 601      | 145,101                |       |                        |
| Leamington. .         | 1962 | 634   | 467,611   | 633  | 466,307                | 1,267    | 933,918                |       |                        |
|                       | 1963 | 550   | 450,275   | 548  | 450,118                | 1,098    | 900,393                |       |                        |
|                       | 1964 | 426   | 116,952   | 430  | 118,282                | 856      | 235,234                |       |                        |
| Pelee Island. .       | 1962 | 877   | 125,092   | 877  | 125,092                | 1,754    | 250,184                |       |                        |
|                       | 1963 | 793   | 120,186   | 794  | 120,391                | 1,587    | 240,577                |       |                        |
|                       | 1964 | 791   | 113,995   | 791  | 113,995                | 1,582    | 227,990                |       |                        |
| Point Pelee. .        | 1962 | 198   | 120,674   | 198  | 120,674                | 396      | 241,348                |       |                        |
|                       | 1963 | 172   | 121,126   | 172  | 121,126                | 344      | 242,252                |       |                        |
|                       | 1964 | 217   | 162,217   | 217  | 162,217                | 434      | 324,434                |       |                        |
| Walkerville. .        | 1962 | 111   | 253,246   | 110  | 252,000                | 221      | 505,246                |       |                        |
|                       | 1963 | 164   | 272,432   | 163  | 264,431                | 327      | 536,863                |       |                        |
|                       | 1964 | 102   | 262,358   | 104  | 276,696                | 206      | 539,054                |       |                        |
| Windsor. . . .        | 1962 | 2,217 | 1,339,302 | 2,283                                      | 1,459,641              | 4,500    | 2,798,934              |       |                        |
|                       | 1963 | 1,902 | 1,968,235 | 1,925                                      | 1,965,612              | 3,827    | 3,933,847              |       |                        |
|                       | 1964 | 2,008 | 2,238,556 | 1,994                                      | 2,207,457              | 4,002    | 4,446,013              |       |                        |
| Total, Essex. . . . . | 1962 | 4,389 | 2,546,568 | 4,459                                      | 2,663,916              | 8,848    | 5,210,484              |       |                        |
|                       | 1963 | 3,913 | 3,173,385 | 3,939                                      | 3,163,583              | 7,852    | 6,336,968              |       |                        |
|                       | 1964 | 3,917 | 3,159,994 | 3,913                                      | 3,141,694              | 7,830    | 6,301,688              |       |                        |
| Kent County           |      |       |           |  |                        |          |                        |       |                        |
| Chatham. . . .        | 1962 | 3     | 202       | 5  | 364                    | 8        | 566                    |       |                        |
|                       | 1963 | 2     | 162       | 2  | 162                    | 4        | 324                    |       |                        |
|                       | 1964 |       |           |  |                        |          |                        |       |                        |
| Erieau. . . . .       | 1962 | 68    | 86,118    | 65   | 84,220                 | 133      | 170,338                |       |                        |
|                       | 1963 | 71    | 67,898    | 70   | 68,132                 | 141      | 136,030                |       |                        |
|                       | 1964 | 61    | 120,316   | 65   | 122,492                | 126      | 242,808                |       |                        |
| Wallaceburg. .        | 1962 | 29    | 37,427    | 31   | 37,434                 | 60       | 74,861                 |       |                        |
|                       | 1963 | 19    | 28,411    | 19   | 28,411                 | 38       | 56,822                 |       |                        |
|                       | 1964 | 28    | 40,888    | 28   | 40,888                 | 56       | 81,776                 |       |                        |
| Total, Kent. . . . .  | 1962 | 100   | 123,747   | 101  | 122,018                | 201      | 245,765                |       |                        |
|                       | 1963 | 92    | 96,471    | 91   | 96,705                 | 183      | 193,176                |       |                        |
|                       | 1964 | 89    | 161,204   | 93   | 163,380                | 182      | 324,584                |       |                        |

# TRANSPORTATION AND COMMUNICATIONS

## NUMBER AND REGISTERED NET TONNAGE OF VESSELS, ARRIVALS AND DEPARTURES, PORTS, LAKE ST. CLAIR REGION, 1962 TO 1964, (CONT'D)

|                      |      | Coastwise Shipping |           |            |           |            |           |
|----------------------|------|--------------------|-----------|------------|-----------|------------|-----------|
|                      |      | Arrived            |           | Departed   |           | Total      |           |
| Port                 | Year | Registered         |           | Registered |           | Registered |           |
|                      |      | No.                | Net Tons  | No.        | Net Tons  | No.        | Net Tons  |
| Lambton County       |      |                    |           |            |           |            |           |
| Courtright . . .     | 1962 | 2                  | 4,939     | 1          | 7,262     | 3          | 12,201    |
|                      | 1963 | 1                  | 1,833     |            |           | 1          | 1,833     |
|                      | 1964 |                    |           | 3          | 9,132     | 3          | 9,132     |
| Sarnia . . . . .     | 1962 | 815                | 1,640,735 | 811        | 1,593,312 | 1,626      | 3,234,047 |
|                      | 1963 | 802                | 1,646,105 | 805        | 1,645,736 | 1,607      | 3,291,841 |
|                      | 1964 | 951                | 1,883,467 | 955        | 1,949,652 | 1,906      | 3,833,119 |
| Sombra . . . . .     | 1962 | 1                  | 2,011     |            |           | 1          | 2,011     |
|                      | 1963 |                    |           |            |           |            |           |
|                      | 1964 |                    |           | 1          | 2,860     | 1          | 2,860     |
| Total, Lambton . . . | 1962 | 818                | 1,647,685 | 812        | 1,600,574 | 1,630      | 3,248,259 |
|                      | 1963 | 803                | 1,647,938 | 805        | 1,645,736 | 1,608      | 3,293,674 |
|                      | 1964 | 951                | 1,883,467 | 959        | 1,961,644 | 1,910      | 3,845,111 |
| Total, Region . . .  | 1962 | 2,579              | 2,580,444 | 2,691      | 2,812,319 | 5,270      | 5,392,763 |
|                      | 1963 | 2,598              | 3,007,746 | 2,677      | 3,228,316 | 5,275      | 6,236,062 |
|                      | 1964 | 2,857              | 3,310,223 | 2,874      | 3,493,778 | 5,731      | 6,804,001 |

|                      |      | International Sea Borne |            |          |            |       |            |
|----------------------|------|-------------------------|------------|----------|------------|-------|------------|
|                      |      | Arrived                 |            | Departed |            | Total |            |
| Port                 | Year | No.                     | Registered | No.      | Registered | No.   | Registered |
|                      |      |                         | Net Tons   |          | Net Tons   |       | Net Tons   |
| Lambton County       |      |                         |            |          |            |       |            |
| Courtright . . .     | 1962 | 1                       | 7,262      | 2        | 4,939      | 3     | 12,201     |
|                      | 1963 | 1                       | 4,102      | 2        | 5,935      | 3     | 10,037     |
|                      | 1964 | 6                       | 24,839     | 3        | 15,707     | 9     | 40,546     |
| Sarnia . . . . .     | 1962 | 353                     | 1,035,868  | 355      | 1,067,347  | 708   | 2,103,215  |
|                      | 1963 | 347                     | 1,054,490  | 343      | 1,072,983  | 690   | 2,127,473  |
|                      | 1964 | 389                     | 1,232,127  | 374      | 1,179,857  | 763   | 2,411,984  |
| Sombra . . . . .     | 1962 | 3                       | 12,051     | 4        | 14,062     | 7     | 26,113     |
|                      | 1963 |                         |            |          |            |       |            |
|                      | 1964 | 2                       | 4,693      | 1        | 1,833      | 3     | 6,526      |
| Total, Lambton . . . | 1962 | 357                     | 1,055,181  | 361      | 1,086,348  | 718   | 2,141,529  |
|                      | 1963 | 348                     | 1,058,592  | 345      | 1,078,918  | 693   | 2,137,510  |
|                      | 1964 | 397                     | 1,261,659  | 378      | 1,197,397  | 775   | 2,459,056  |
| Total, Region . . .  | 1962 | 3,085                   | 2,792,737  | 3,042    | 2,660,537  | 6,127 | 5,453,274  |
|                      | 1963 | 2,558                   | 2,968,640  | 2,503    | 2,756,626  | 5,061 | 5,725,266  |
|                      | 1964 | 2,497                   | 3,156,101  | 2,469    | 2,970,337  | 4,966 | 6,126,438  |

(cont'd next page)

# TRANSPORTATION AND COMMUNICATIONS

## NUMBER AND REGISTERED NET TONNAGE OF VESSELS, ARRIVALS AND DEPARTURES, PORTS, LAKE ST. CLAIR REGION, 1962 TO 1964, (CONT'D)

| Port                 |      | Year  |           | Total Coastwise and International Shipping |           |            |            |            |          |
|----------------------|------|-------|-----------|--|-----------|------------|------------|------------|----------|
|                      |      |       |           | Arrived                                    |           | Departed   |            | Total      |          |
|                      |      |       |           | Registered                                 |           | Registered |            | Registered |          |
|                      |      |       |           | No.  | Net Tons  | No.        | Net Tons   | No.        | Net Tons |
| Lambton County       |      |       |           |  |           |            |            |            |          |
| Courtright . . .     | 1962 | 3     | 12,201    | 3  | 12,201    | 6          | 24,402     |            |          |
|                      | 1963 | 2     | 5,935     | 2  | 5,935     | 4          | 11,870     |            |          |
|                      | 1964 | 6     | 24,839    | 6  | 24,839    | 12         | 49,678     |            |          |
| Sarnia . . . . .     | 1962 | 1,168 | 2,676,603 | 1,166                                      | 2,660,659 | 2,334      | 5,337,262  |            |          |
|                      | 1963 | 1,149 | 2,700,595 | 1,152                                      | 2,718,719 | 2,297      | 5,419,314  |            |          |
|                      | 1964 | 1,340 | 3,115,594 | 1,329                                      | 3,129,509 | 2,669      | 6,245,103  |            |          |
| Sombra . . . . .     | 1962 | 4     | 14,062    | 4  | 14,062    | 8          | 28,124     |            |          |
|                      | 1963 |       |           |  |           |            |            |            |          |
|                      | 1964 | 2     | 4,693     | 2  | 4,693     | 4          | 9,386      |            |          |
| Total, Lambton . . . | 1962 | 1,175 | 2,702,866 | 1,173                                      | 2,686,922 | 2,348      | 5,389,788  |            |          |
|                      | 1963 | 1,151 | 2,706,530 | 1,150                                      | 2,724,654 | 2,301      | 5,431,184  |            |          |
|                      | 1964 | 1,348 | 3,145,126 | 1,337                                      | 3,159,041 | 2,685      | 6,304,167  |            |          |
| Total, Region . . .  | 1962 | 5,664 | 5,373,181 | 5,733                                      | 5,472,856 | 11,397     | 10,846,037 |            |          |
|                      | 1963 | 5,156 | 5,976,386 | 5,180                                      | 5,984,942 | 10,336     | 11,961,328 |            |          |
|                      | 1964 | 5,354 | 6,466,324 | 5,343                                      | 6,464,115 | 10,697     | 12,930,439 |            |          |

## PERCENTAGE DISTRIBUTION OF MOTOR VEHICLE REGISTRATIONS, LAKE ST. CLAIR REGION, 1965

|                         | Passenger<br>% | Commercial<br>% | Total<br>% |
|-------------------------|----------------|-----------------|------------|
| <b>A—Border</b>         |                |                 |            |
| Essex . . . . .         | 87.6           | 12.4            | 100.0      |
| Kent . . . . .          | 79.2           | 20.8            | 100.0      |
| Sub-total . . . . .     | 85.3           | 14.7            | 100.0      |
| <b>B—Lambton</b>        |                |                 |            |
| Lambton . . . . .       | 83.6           | 16.4            | 100.0      |
| Total, Region . . . . . | 84.9           | 15.1            | 100.0      |
| <b>A—Border</b>         |                |                 |            |
| Essex . . . . .         | 58.2           | 46.3            | 56.5       |
| Kent . . . . .          | 20.2           | 29.8            | 21.6       |
| Sub-total . . . . .     | 78.4           | 76.1            | 78.1       |
| <b>B—Lambton</b>        |                |                 |            |
| Lambton . . . . .       | 21.6           | 23.9            | 21.9       |
| Total, Region . . . . . | 100.0          | 100.0           | 100.0      |

# TRANSPORTATION AND COMMUNICATIONS

## MOTOR VEHICLE REGISTRATIONS, COUNTIES, LAKE ST. CLAIR REGION, 1960 TO 1965

|                         | Year | Passenger<br>Automobiles | Commercial<br>Vehicles | Total   | % Change<br>1965/1960 |
|-------------------------|------|--------------------------|------------------------|---------|-----------------------|
| <b>A—Border</b>         |      |                          |                        |         |                       |
| Essex . . . . .         | 1960 | 70,683                   | 11,126                 | 81,809  |                       |
|                         | 1961 | 72,460                   | 10,667                 | 83,127  |                       |
|                         | 1962 | 73,799                   | 11,446                 | 85,245  | +22.0                 |
|                         | 1963 | 74,597                   | 12,119                 | 86,716  |                       |
|                         | 1964 | 78,510                   | 12,232                 | 90,742  |                       |
|                         | 1965 | 87,492                   | 12,349                 | 99,841  |                       |
| Kent . . . . .          | 1960 | 27,967                   | 7,203                  | 35,170  |                       |
|                         | 1961 | 28,022                   | 7,508                  | 35,530  |                       |
|                         | 1962 | 28,601                   | 7,351                  | 35,952  | + 8.7                 |
|                         | 1963 | 39,926                   | 7,533                  | 47,459  |                       |
|                         | 1964 | 41,960                   | 7,590                  | 49,550  |                       |
|                         | 1965 | 30,291                   | 7,949                  | 38,240  |                       |
| Sub-total . . . . .     | 1960 | 98,650                   | 18,329                 | 116,979 |                       |
|                         | 1961 | 100,482                  | 18,175                 | 118,657 |                       |
|                         | 1962 | 102,400                  | 18,797                 | 121,197 | +18.0                 |
|                         | 1963 | 114,523                  | 19,652                 | 134,175 |                       |
|                         | 1964 | 120,470                  | 19,822                 | 140,292 |                       |
|                         | 1965 | 117,783                  | 20,298                 | 138,081 |                       |
| <b>B—Lambton</b>        |      |                          |                        |         |                       |
| Lambton . . . . .       | 1960 | 29,712                   | 5,482                  | 35,194  |                       |
|                         | 1961 | 30,407                   | 5,589                  | 35,996  |                       |
|                         | 1962 | 30,821                   | 5,494                  | 36,315  | +10.3                 |
|                         | 1963 | 32,479                   | 5,740                  | 38,219  |                       |
|                         | 1964 | 34,192                   | 5,784                  | 39,976  |                       |
|                         | 1965 | 32,433                   | 6,378                  | 38,811  |                       |
| Total, Region . . . . . | 1960 | 128,362                  | 23,811                 | 152,173 |                       |
|                         | 1961 | 130,889                  | 23,764                 | 154,653 |                       |
|                         | 1962 | 133,221                  | 24,291                 | 157,512 | +16.2                 |
|                         | 1963 | 147,002                  | 25,392                 | 172,394 |                       |
|                         | 1964 | 154,662                  | 25,606                 | 180,268 |                       |
|                         | 1965 | 150,216                  | 26,676                 | 176,892 |                       |

# TRANSPORTATION AND COMMUNICATIONS

## ROAD AND HIGHWAY MILEAGES BY TYPE OF ROAD, COUNTIES, LAKE ST. CLAIR REGION, 1964

|                            |              | Total<br>Mileage | King's<br>Highways | County<br>Roads | Organized<br>Township<br>Roads | Urban<br>Roads |
|----------------------------|--------------|------------------|--------------------|-----------------|--------------------------------|----------------|
| <b>A—Border</b>            |              |                  |                    |                 |                                |                |
| Essex.....                 | Miles        | 2,050.8          | 224.6              | 259.6           | 1,060.1                        | 506.5          |
|                            | %            | (100.0)          | (11.0)             | (12.7)          | (51.6)                         | (24.7)         |
| Kent.....                  | Miles        | 2,050.1          | 211.6              | 404.2           | 1,223.8                        | 210.5          |
|                            | %            | (100.0)          | (10.3)             | (19.7)          | (59.7)                         | (10.3)         |
| Sub-total.....             | Miles        | 4,100.9          | 436.2              | 663.8           | 2,283.9                        | 717.0          |
|                            | %            | (100.0)          | (10.6)             | (16.2)          | (55.7)                         | (17.5)         |
| <b>B—Lambton</b>           |              |                  |                    |                 |                                |                |
| Lambton.....               | Miles        | 2,137.1          | 190.4              | 241.5           | 1,461.5                        | 243.7          |
|                            | %            | (100.0)          | (8.9)              | (11.3)          | (68.4)                         | (11.4)         |
| <b>Total, Region .....</b> | <b>Miles</b> | <b>6,238.0</b>   | <b>626.6</b>       | <b>905.3</b>    | <b>3,745.4</b>                 | <b>960.7</b>   |
|                            | %            | (100.0)          | (10.0)             | (14.5)          | (60.1)                         | (15.4)         |



**NUMBER AND DISTRIBUTION OF TELEPHONES,  
COUNTIES, LAKE ST. CLAIR REGION, 1954 AND 1965**

|                           | Independent System |               | Percentage Change |  | Bell Telephone Company |                | Percentage Change |  | Total          |                | Percentage Change |  |
|---------------------------|--------------------|---------------|-------------------|--|------------------------|----------------|-------------------|--|----------------|----------------|-------------------|--|
|                           | 1965               | 1954          | 1965/54           |  | 1965                   | 1954           | 1965/54           |  | 1965           | 1954           | 1965/54           |  |
| Essex.....                | 3,689              | 4,749         | -22.3             |  | 106,947                | 67,195         | +59.2             |  | 110,636        | 71,944         | +53.8             |  |
| Kent.....                 | 2,206              | 1,269         | +73.8             |  | 36,789                 | 24,718         | +48.8             |  | 38,995         | 25,987         | +50.1             |  |
| Sub-total.....            | 5,895              | 6,018         | -20.4             |  | 143,736                | 91,913         | +56.4             |  | 149,631        | 97,931         | +52.8             |  |
| Lambton.....              | 7,070              | 5,529         | +27.9             |  | 34,365                 | 20,210         | +70.0             |  | 41,435         | 25,739         | +61.0             |  |
| <b>Total, Region.....</b> | <b>12,965</b>      | <b>11,547</b> | <b>+12.3</b>      |  | <b>178,101</b>         | <b>112,123</b> | <b>+58.8</b>      |  | <b>191,066</b> | <b>123,670</b> | <b>+54.5</b>      |  |

# CONSTRUCTION, HOUSING AND HOUSEHOLD FACILITIES

## TYPE OF OCCUPIED DWELLINGS, COUNTIES, LAKE ST. CLAIR REGION, 1951 AND 1961

|                    | Year | Total<br>Occupied<br>Dwellings <sup>(1)</sup> |         | Single<br>Detached <sup>(2)</sup> | Single<br>Attached <sup>(3)</sup> | Apartment<br>or<br>Flat <sup>(4)</sup> | Other <sup>(5)</sup> |
|--------------------|------|---|---------|-----------------------------------|-----------------------------------|--|----------------------|
| <b>A—Border</b>    |      |   |         |                                   |                                   |  |                      |
| Essex.....         | 1951 | No.   | 57,525  | 42,780                            | 3,140                             | 11,450                                 | 155                  |
|                    |      | %   | (100.0) | (74.4)                            | (5.4)                             | (19.9)                                 | (0.3)                |
|                    | 1961 | No.   | 70,913  | 55,602                            | 3,909                             | 11,342                                 | 60                   |
|                    |      | %   | (100.0) | (78.4)                            | (5.5)                             | (16.0)                                 | (0.1)                |
| Kent.....          | 1951 | No.   | 22,180  | 17,660                            | 1,260                             | 3,185                                  | 75                   |
|                    |      | %   | (100.0) | (79.6)                            | (5.7)                             | (14.4)                                 | (0.3)                |
|                    | 1961 | No.   | 25,133  | 20,875                            | 1,211                             | 2,996                                  | 51                   |
|                    |      | %   | (100.0) | (83.1)                            | (4.8)                             | (11.9)                                 | (0.2)                |
| Sub-total.....     | 1951 | No.   | 79,705  | 60,440                            | 4,400                             | 14,635                                 | 230                  |
|                    |      | %   | (100.0) | (75.8)                            | (5.5)                             | (18.4)                                 | (0.3)                |
|                    | 1961 | No.   | 96,046  | 76,477                            | 5,120                             | 14,338                                 | 111                  |
|                    |      | %   | (100.0) | (79.6)                            | (5.4)                             | (14.9)                                 | (0.1)                |
| <b>B—Lambton</b>   |      |   |         |                                   |                                   |  |                      |
| Lambton.....       | 1951 | No.   | 20,610  | 16,740                            | 860                               | 2,900                                  | 110                  |
|                    |      | %   | (100.0) | (81.2)                            | (4.2)                             | (14.1)                                 | (0.5)                |
|                    | 1961 | No.   | 27,535  | 23,446                            | 862                               | 3,148                                  | 79                   |
|                    |      | %   | (100.0) | (85.2)                            | (3.1)                             | (11.4)                                 | (0.3)                |
| Total, Region..... | 1951 | No.   | 100,315 | 77,180                            | 5,260                             | 17,535                                 | 340                  |
|                    |      | %   | (100.0) | (76.9)                            | (5.3)                             | (17.5)                                 | (0.3)                |
|                    | 1961 | No.   | 123,581 | 99,923                            | 5,982                             | 17,486                                 | 190                  |
|                    |      | %   | (100.0) | (80.9)                            | (4.8)                             | (14.1)                                 | (0.2)                |

|                                  |      |     |           |           |         |         |       |
|----------------------------------|------|-----|-----------|-----------|---------|---------|-------|
| Total, Ontario . . . . .         | 1951 | No. | 1,181,125 | 823,930   | 133,855 | 219,360 | 3,980 |
|                                  |      | %   | (100.0)   | (89.8)    | (11.3)  | (18.6)  | (0.3) |
| 1961                             |      | No. | 1,640,750 | 1,140,653 | 170,312 | 324,859 | 4,926 |
|                                  |      | %   | (100.0)   | (69.5)    | (10.4)  | (19.8)  | (0.3) |
| Region as % of Ontario . . . . . | 1951 | %   | 8.5       | 9.4       | 3.9     | 8.0     | 8.5   |
|                                  | 1961 | %   | 7.5*      | 8.8       | 3.5     | 5.4     | 3.9   |

- (1) For Census purposes a dwelling is defined as a structurally separate set of living quarters with a private entrance from outside the building or from a common hallway or stairway inside.
- (2) Defined as a "single house" containing only one dwelling unit which is completely separated on all sides from any other dwelling or structure.
- (3) Includes dwelling units separated by a common wall extending from ground to roof.
- (4) Includes apartments in apartment blocks or apartment hotels; suites in duplexes or triplexes (i.e. division between dwelling units is horizontal); living quarters above or in rear of business premises; janitor's quarters; private quarters for families of staff members in hospitals or other institutions.
- (5) Includes mobile dwellings such as trailers, railway cars, boats, etc., and other unusual types of dwellings (makeshift or temporary) occupied by persons with no other usual residence at the Census date.

### NUMBER OF DWELLING UNITS STARTED AND COMPLETED IN NEW RESIDENTIAL CONSTRUCTION, SELECTED CENTRES, LAKE ST. CLAIR REGION, 1954 AND 1961-1965

|                                  | Started |      |      |      |       |       | Completed |      |      |       |
|----------------------------------|---------|------|------|------|-------|-------|-----------|------|------|-------|
|                                  | 1954    | 1961 | 1962 | 1963 | 1964  | 1965  | 1954      | 1961 | 1962 | 1963  |
| Chatham (city) . . . . .         | 92      | 180  | 142  | 128  | 173   | 205   | 130       | 147  | 146  | 148   |
| Samia (city) . . . . .           | 404     | 443  | 142  | 335  | 344   | 434   | 334       | 548  | 194  | 216   |
| Windsor (Metropolitan) . . . . . | 1,677   | 526  | 495  | 728  | 1,125 | 1,523 | 1,722     | 497  | 515  | 438   |
|                                  |         |      |      |      |       |       |           |      |      | 919   |
|                                  |         |      |      |      |       |       |           |      |      | 1,299 |

# CONSTRUCTION, HOUSING AND HOUSEHOLD FACILITIES

## OCCUPIED DWELLINGS SHOWING TENURE AND SPECIFIED CHARACTERISTICS, COUNTIES, LAKE ST. CLAIR REGION, 1951 AND 1961

|                             | Year | Total Occupied Dwellings |     | Average Number of Rooms | Tenure <sup>(1)</sup> |         |                 |         | In Need of Major Repair |           | In Good Condition |   |  |
|-----------------------------|------|--------------------------|-----|-------------------------|-----------------------|---------|-----------------|---------|-------------------------|-----------|-------------------|---|--|
|                             |      | No.                      | No. |                         | Owner-Occupied        |         | Tenant-Occupied |         | No.                     | %         | No.               | % |  |
|                             |      |                          |     |                         | No.                   | %       | No.             | %       |                         |           |                   |   |  |
| <b>A—Border</b>             |      |                          |     |                         |                       |         |                 |         |                         |           |                   |   |  |
| Essex.....                  | 1951 | 57,525                   | 5.3 | 37,690                  | 65.5                  | 19,835  | 34.5            | 5,605   | 9.7                     | n.a.      | —                 |   |  |
|                             | 1961 | 70,913                   | 5.5 | 52,612                  | 74.2                  | 18,301  | 25.8            | 3,621   | 5.1                     | 52,614    | 74.2              |   |  |
| Ken.....                    | 1951 | 22,180                   | 5.7 | 15,270                  | 68.8                  | 6,910   | 31.2            | 2,675   | 12.1                    | n.a.      | —                 |   |  |
|                             | 1961 | 25,133                   | 5.9 | 18,166                  | 72.3                  | 6,967   | 27.7            | 1,576   | 6.3                     | 17,559    | 69.9              |   |  |
| Sub-total.....              | 1951 | 79,705                   | 5.4 | 52,960                  | 66.4                  | 26,745  | 33.6            | 8,280   | 10.4                    | n.a.      | —                 |   |  |
|                             | 1961 | 96,046                   | 5.6 | 70,778                  | 73.7                  | 25,268  | 26.3            | 5,197   | 5.4                     | 70,173    | 73.1              |   |  |
| <b>B—Lambton</b>            |      |                          |     |                         |                       |         |                 |         |                         |           |                   |   |  |
| Lambton.....                | 1951 | 20,610                   | 5.8 | 15,835                  | 76.8                  | 4,775   | 23.2            | 2,475   | 12.0                    | n.a.      | —                 |   |  |
|                             | 1961 | 27,535                   | 5.7 | 21,718                  | 78.9                  | 5,817   | 21.1            | 1,363   | 5.0                     | 19,995    | 72.6              |   |  |
| Total, Region.....          | 1951 | 100,315                  | 5.5 | 68,795                  | 68.6                  | 31,520  | 31.4            | 10,755  | 10.7                    | n.a.      | —                 |   |  |
|                             | 1961 | 123,581                  | 5.6 | 92,496                  | 74.8                  | 31,085  | 25.2            | 6,560   | 5.3                     | 90,168    | 73.0              |   |  |
| Total, Ontario.....         | 1951 | 1,181,125                | 5.7 | 821,335                 | 69.5                  | 359,790 | 30.5            | 115,350 | 9.8                     | n.a.      | —                 |   |  |
|                             | 1961 | 1,640,750                | 5.5 | 1,157,229               | 70.5                  | 483,521 | 29.5            | 74,127  | 4.5                     | 1,252,216 | 76.3              |   |  |
| Region as % of Ontario..... | 1951 | 8.5                      |     | 8.4                     |                       | 8.8     |                 | 9.3     |                         | —         |                   |   |  |
|                             | 1961 | 7.5                      |     | 8.0                     |                       | 6.4     |                 | 8.8     |                         | 7.2       |                   |   |  |

n.a. Not available.

(1) Dwellings were classified as owned even though mortgaged if it belonged to some member of the household. Tenant-occupied includes dwellings rented by the head or a member of the household, and dwellings in which the head of the family was provided with free living quarters, whether or not in return for services rendered.

# CONSTRUCTION, HOUSING AND HOUSEHOLD FACILITIES

## OCCUPIED DWELLINGS SHOWING WATER AND SEWAGE UTILITIES, COUNTIES, LAKE ST. CLAIR REGION, 1951 AND 1961

|                            | Year             | Total<br>Occupied<br>Dwellings | Dwellings with Running Water |                   |                     |                   |                        | Dwellings<br>Without<br>Running Water | Dwellings with             |      |
|----------------------------|------------------|--------------------------------|------------------------------|-------------------|---------------------|-------------------|------------------------|---------------------------------------|----------------------------|------|
|                            |                  |                                | Source                       |                   | Hot<br>and Cold     | Cold<br>Only      | Connection<br>to Sewer |                                       | Septic Tank<br>or Cesspool |      |
|                            |                  |                                | Municipal<br>Mains           | Private<br>Source |                     |                   |                        |                                       |                            |      |
|                            |                  |                                |                              |                   |                     |                   |                        |                                       |                            |      |
| <b>A—Border</b>            |                  |                                |                              |                   |                     |                   |                        |                                       |                            |      |
| Essex.....                 | 1951 No.<br>%    | 57,525<br>(100.0)              | n.a.<br>—                    | n.a.<br>—         | 46,280<br>(80.4)    | 6,140<br>(10.7)   | 5,105<br>(8.9)         | n.a.<br>—                             | n.a.                       | n.a. |
|                            | 1961 No.<br>%    | 70,913<br>(100.0)              | 61,073<br>(86.1)             | 8,379<br>(11.8)   | 67,052<br>(94.5)    | 2,400<br>(3.4)    | 1,461<br>(2.1)         | 41,758<br>(58.9)                      | 26,515<br>(37.4)           |      |
| Kent.....                  | 1951 No.<br>%    | 22,180<br>(100.0)              | n.a.<br>—                    | n.a.<br>—         | 14,370<br>(64.8)    | 3,490<br>(15.7)   | 4,320<br>(19.5)        | n.a.<br>—                             | n.a.                       | n.a. |
|                            | 1961 No.<br>%    | 25,133<br>(100.0)              | 15,125<br>(60.2)             | 8,520<br>(33.9)   | 21,912<br>(87.2)    | 1,733<br>(6.9)    | 1,488<br>(5.9)         | 8,431<br>(33.5)                       | 13,943<br>(55.5)           |      |
| Sub-total.....             | 1951 No.<br>%    | 79,705<br>(100.0)              | n.a.<br>—                    | n.a.<br>—         | 60,650<br>(76.1)    | 9,630<br>(12.1)   | 9,425<br>(11.8)        | n.a.<br>—                             | n.a.                       | n.a. |
|                            | 1961 No.<br>%    | 96,046<br>(100.0)              | 76,198<br>(79.3)             | 16,899<br>(17.6)  | 88,964<br>(92.6)    | 4,133<br>(4.3)    | 2,949<br>(3.1)         | 50,189<br>(52.3)                      | 40,458<br>(42.1)           |      |
| <b>B—Lambton</b>           |                  |                                |                              |                   |                     |                   |                        |                                       |                            |      |
| Lambton.....               | 1951 No.<br>%    | 20,610<br>(100.0)              | n.a.<br>—                    | n.a.<br>—         | 13,420<br>(65.1)    | 2,555<br>(12.4)   | 4,635<br>(22.5)        | n.a.<br>—                             | n.a.                       | n.a. |
|                            | 1961 No.<br>%    | 27,535<br>(100.0)              | 19,495<br>(70.8)             | 6,211<br>(22.6)   | 24,430<br>(88.7)    | 1,276<br>(4.6)    | 1,829<br>(6.7)         | 10,805<br>(39.2)                      | 14,023<br>(50.9)           |      |
| Total, Region.....         | 1951 No.<br>%    | 100,315<br>(100.0)             | n.a.<br>—                    | n.a.<br>—         | 74,070<br>(73.8)    | 12,185<br>(12.2)  | 14,060<br>(14.0)       | n.a.<br>—                             | n.a.                       | n.a. |
|                            | 1961 No.<br>%    | 123,581<br>(100.0)             | 95,693<br>(77.4)             | 23,110<br>(18.7)  | 113,394<br>(91.7)   | 5,409<br>(4.4)    | 4,778<br>(3.9)         | 60,994<br>(49.4)                      | 54,481<br>(44.1)           |      |
| Total, Ontario.....        | 1951 No.<br>%    | 1,181,125<br>(100.0)           | n.a.<br>—                    | n.a.<br>—         | 811,145<br>(68.7)   | 159,835<br>(13.5) | 210,145<br>(17.8)      | n.a.<br>—                             | n.a.                       | n.a. |
|                            | 1961 No.<br>%    | 1,640,750<br>(100.0)           | 1,267,248<br>(77.2)          | 276,120<br>(16.8) | 1,462,170<br>(89.1) | 81,198<br>(5.0)   | 97,382<br>(5.9)        | 1,095,011<br>(66.7)                   | 396,487<br>(24.2)          |      |
| Region as % of Ontario.... | 1951 %<br>1961 % | 8.5<br>7.5                     | n.a.<br>7.6                  | n.a.<br>8.4       | 9.1<br>7.8          | 7.6<br>6.7        | 6.7<br>4.9             | n.a.<br>5.6                           | n.a.<br>13.7               |      |

n.a. Not available.



# CONSTRUCTION, HOUSING AND HOUSEHOLD FACILITIES

## OCCUPIED DWELLINGS SHOWING SANITATION FACILITIES, COUNTIES, LAKE ST. CLAIR REGION, 1951 AND 1961

|                             | Year | Total<br>Occupied<br>Dwellings | Occupied Dwellings With |                 |                      |                     |                  |                   |
|-----------------------------|------|--------------------------------|-------------------------|-----------------|----------------------|---------------------|------------------|-------------------|
|                             |      |                                | Bath Facilities         |                 | Inside Flush Toilet  |                     |                  |                   |
|                             |      |                                | Exclusive<br>Use        | Shared<br>Use   | No Bath<br>or Shower | Exclusive<br>Use    | Shared<br>Use    | Two<br>or More    |
|                             |      |                                |                         |                 |                      |                     |                  |                   |
| <b>A—Border</b>             |      |                                |                         |                 |                      |                     |                  |                   |
| Essex.....                  | 1951 | No. 57,525<br>% (100.0)        | 45,425<br>(79.0)        | 2,480<br>(4.3)  | 9,620<br>(16.7)      | 47,775<br>(83.1)    | 2,370<br>(4.1)   | n.a.<br>—         |
|                             | 1961 | No. 70,913<br>% (100.0)        | 65,624<br>(92.5)        | 1,657<br>(2.3)  | 2,171<br>(3.1)       | 64,081<br>(90.4)    | 4,447<br>(6.3)   | 9,236<br>(13.0)   |
| Kent.....                   | 1951 | No. 22,180<br>% (100.0)        | 13,580<br>(61.2)        | 700<br>(3.2)    | 7,900<br>(35.6)      | 14,585<br>(65.8)    | 790<br>(3.6)     | n.a.<br>—         |
|                             | 1961 | No. 25,133<br>% (100.0)        | 21,166<br>(84.2)        | 424<br>(1.7)    | 2,055<br>(8.2)       | 21,311<br>(84.8)    | 1,093<br>(4.3)   | 2,643<br>(10.5)   |
| Sub-total.....              | 1951 | No. 79,705<br>% (100.0)        | 59,005<br>(74.0)        | 3,180<br>(4.0)  | 17,520<br>(22.0)     | 62,360<br>(78.2)    | 3,160<br>(4.0)   | n.a.<br>—         |
|                             | 1961 | No. 96,046<br>% (100.0)        | 86,790<br>(90.4)        | 2,081<br>(2.2)  | 4,226<br>(4.4)       | 85,392<br>(88.9)    | 5,540<br>(5.8)   | 11,879<br>(12.4)  |
| <b>B—Lambton</b>            |      |                                |                         |                 |                      |                     |                  |                   |
| Lambton.....                | 1951 | No. 20,610<br>% (100.0)        | 13,070<br>(63.4)        | 690<br>(3.4)    | 6,850<br>(33.2)      | 13,855<br>(67.2)    | 640<br>(3.1)     | n.a.<br>—         |
|                             | 1961 | No. 27,535<br>% (100.0)        | 23,829<br>(86.5)        | 513<br>(1.9)    | 1,364<br>(5.0)       | 23,454<br>(85.2)    | 1,395<br>(5.1)   | 3,136<br>(11.4)   |
| Total, Region.....          | 1951 | No. 100,315<br>% (100.0)       | 72,075<br>(71.8)        | 3,870<br>(3.9)  | 24,370<br>(24.3)     | 76,215<br>(76.0)    | 3,800<br>(3.8)   | n.a.<br>—         |
|                             | 1961 | No. 123,581<br>% (100.0)       | 110,619<br>(89.5)       | 2,594<br>(2.1)  | 5,590<br>(4.5)       | 108,846<br>(88.1)   | 6,935<br>(5.6)   | 15,015<br>(12.1)  |
| Total, Ontario.....         | 1951 | No. 1,181,125<br>% (100.0)     | 805,035<br>(68.2)       | 55,330<br>(4.7) | 320,760<br>(27.1)    | 846,760<br>(71.7)   | 56,090<br>(4.7)  | n.a.<br>—         |
|                             | 1961 | No. 1,640,750<br>% (100.0)     | 1,397,122<br>(85.2)     | 64,664<br>(3.9) | 81,582<br>(5.0)      | 1,378,207<br>(84.0) | 115,433<br>(7.0) | 227,607<br>(13.9) |
| Region as % of Ontario..... | 1951 | % 8.5                          | 9.0                     | 7.0             | 7.6                  | 9.0                 | 6.8              | —                 |
|                             | 1961 | % 7.5                          | 7.9                     | 4.0             | 6.9                  | 7.9                 | 6.0              | 6.6               |

n.a. Not available.

# CONSTRUCTION, HOUSING AND HOUSEHOLD FACILITIES

## OCCUPIED DWELLINGS SHOWING PRINCIPAL HEATING EQUIPMENT AND FUEL, COUNTIES, LAKE ST. CLAIR REGION, 1951 AND 1961

|                           | Year        | Total<br>Occupied<br>Dwellings | Occupied Dwellings With |             |               |              |                   |             |               |             |               |             |
|---------------------------|-------------|--------------------------------|-------------------------|-------------|---------------|--------------|-------------------|-------------|---------------|-------------|---------------|-------------|
|                           |             |                                | Furnace Heating         |             |               |              | Type of Fuel Used |             |               |             |               |             |
|                           |             |                                | Steam or Hot Water      | Hot Air     |               | Coal or Wood | Oil               |             | Gas           |             |               |             |
|                           |             |                                | No.                     | %           | No.           | %            | No.               | %           | No.           | %           | No.           | %           |
| <b>A—Border</b>           |             |                                |                         |             |               |              |                   |             |               |             |               |             |
| Essex.....                | 1951        | 57,525                         | 7,815                   | 13.6        | 22,375        | 38.9         | 36,210            | 62.9        | 10,435        | 18.1        | 10,805        | 18.8        |
|                           | 1961        | 70,913                         | 9,281                   | 13.1        | 39,951        | 56.3         | 6,324             | 8.9         | 19,475        | 27.5        | 44,872        | 63.3        |
| Kent.....                 | 1951        | 22,180                         | 1,265                   | 5.7         | 5,060         | 22.8         | 10,370            | 46.8        | 2,660         | 12.0        | 9,095         | 41.0        |
|                           | 1961        | 25,133                         | 1,931                   | 7.7         | 9,835         | 39.1         | 3,156             | 12.6        | 3,768         | 15.0        | 18,036        | 71.8        |
| Sub-total.....            | 1951        | 79,705                         | 9,080                   | 11.4        | 27,435        | 34.4         | 46,580            | 58.4        | 13,095        | 16.4        | 19,900        | 25.0        |
|                           | 1961        | 96,046                         | 11,212                  | 11.7        | 49,786        | 51.8         | 9,480             | 9.9         | 23,243        | 24.2        | 62,908        | 65.5        |
| <b>B—Lambton</b>          |             |                                |                         |             |               |              |                   |             |               |             |               |             |
| Lambton.....              | 1951        | 20,610                         | 2,170                   | 10.5        | 7,225         | 35.1         | 13,585            | 65.9        | 3,590         | 17.4        | 3,390         | 16.4        |
|                           | 1961        | 27,535                         | 3,040                   | 11.0        | 15,639        | 56.8         | 4,400             | 16.0        | 7,196         | 26.1        | 15,809        | 57.4        |
| <b>Total, Region.....</b> | <b>1951</b> | <b>100,315</b>                 | <b>11,250</b>           | <b>11.2</b> | <b>34,660</b> | <b>34.6</b>  | <b>60,165</b>     | <b>60.0</b> | <b>16,685</b> | <b>16.6</b> | <b>23,290</b> | <b>23.2</b> |
|                           | <b>1961</b> | <b>123,581</b>                 | <b>14,252</b>           | <b>11.5</b> | <b>65,425</b> | <b>52.9</b>  | <b>13,880</b>     | <b>11.2</b> | <b>30,439</b> | <b>24.6</b> | <b>78,717</b> | <b>63.7</b> |
| Total, Ontario.....       | 1951        | 1,181,125                      | 239,985                 | 20.3        | 491,980       | 41.7         | 839,635           | 71.1        | 293,945       | 24.9        | 45,015        | 3.8         |
|                           | 1961        | 1,640,750                      | 350,264                 | 21.3        | 969,157       | 59.1         | 293,635           | 17.9        | 1,014,153     | 61.8        | 327,938       | 20.0        |
| Region as % of Ontario..  | 1951        | 8.5                            | 4.7                     |             | 7.0           |              | 7.2               |             | 5.7           |             | 51.7          |             |
|                           | 1961        | 7.5                            | 4.1                     |             | 6.8           |              | 4.7               |             | 3.0           |             | 24.0          |             |

OCCUPIED DWELLINGS SHOWING SPECIFIED LIVING CONVENIENCES,  
COUNTIES, LAKE ST. CLAIR REGION, 1951 AND 1961

|                | Year | Total<br>Occupied<br>Dwellings | Occupied Dwellings with  |            |        |                 |                |             |                      |        |
|----------------|------|--------------------------------|--------------------------|------------|--------|-----------------|----------------|-------------|----------------------|--------|
|                |      |                                | Refrigeration Facilities |            |        | Home<br>Freezer | Television Set |             | Passenger Automobile |        |
|                |      |                                | Total(·)                 | Mechanical | Icebox |                 | Total          | Two or More |                      |        |
| A—Border       |      |                                |                          |            |        |                 |                |             |                      |        |
| Essex.....     | 1951 | No.                            | 54,970                   | 37,520     | 17,260 | n.a.            | n.a.           | n.a.        | 32,285               | n.a.   |
|                |      | %                              | (95.6)                   | (65.2)     | (30.0) | —               | —              | —           | (56.1)               | —      |
|                | 1961 | No.                            | 70,188                   | 69,830     | 348    | 8,333           | 66,695         | 5,926       | 53,733               | 6,722  |
|                |      | %                              | (99.0)                   | (98.5)     | (0.5)  | (11.8)          | (94.1)         | (8.4)       | (75.8)               | (9.5)  |
|                |      |                                |                          |            |        |                 |                |             |                      |        |
| Kent.....      | 1951 | No.                            | 19,095                   | 13,635     | 5,310  | n.a.            | n.a.           | n.a.        | 14,180               | n.a.   |
|                |      | %                              | (86.1)                   | (61.5)     | (23.9) | —               | —              | —           | (63.9)               | —      |
|                | 1961 | No.                            | 24,575                   | 24,375     | 185    | 4,117           | 22,529         | 886         | 20,306               | 2,183  |
|                |      | %                              | (97.8)                   | (97.0)     | (0.7)  | (16.4)          | (89.6)         | (3.5)       | (80.8)               | (8.7)  |
|                |      |                                |                          |            |        |                 |                |             |                      |        |
| Sub-total..... | 1951 | No.                            | 74,065                   | 51,155     | 22,570 | n.a.            | n.a.           | n.a.        | 46,465               | n.a.   |
|                |      | %                              | (92.9)                   | (64.2)     | (28.3) | —               | —              | —           | (58.3)               | —      |
|                | 1961 | No.                            | 94,763                   | 94,205     | 533    | 12,450          | 89,224         | 6,812       | 74,039               | 8,905  |
|                |      | %                              | (98.7)                   | (98.1)     | (0.6)  | (13.0)          | (92.9)         | (7.1)       | (77.1)               | (9.3)  |
|                |      |                                |                          |            |        |                 |                |             |                      |        |
| B—Lambton      |      |                                |                          |            |        |                 |                |             |                      |        |
| Lambton.....   | 1951 | No.                            | 17,210                   | 12,880     | 4,240  | n.a.            | n.a.           | n.a.        | 13,360               | n.a.   |
|                |      | %                              | (83.5)                   | (62.5)     | (20.6) | —               | —              | —           | (64.8)               | —      |
|                | 1961 | No.                            | 26,978                   | 26,696     | 267    | 4,808           | 24,439         | 1,209       | 23,111               | 2,832  |
|                |      | %                              | (98.0)                   | (97.0)     | (1.0)  | (17.5)          | (88.8)         | (4.4)       | (83.9)               | (10.6) |

# CONSTRUCTION, HOUSING AND HOUSEHOLD FACILITIES

|                                   |     |           |           |           |         |         |           |         |           |         |
|-----------------------------------|-----|-----------|-----------|-----------|---------|---------|-----------|---------|-----------|---------|
| Total, Region . . . . . 1951      | No. | 100,315   | 91,275    | 64,035    | 26,810  | n.a.    | n.a.      | n.a.    | 59,825    | n.a.    |
|                                   | %   | (100.0)   | (91.0)    | (63.8)    | (26.7)  | —       | —         | —       | (59.6)    | —       |
| 1961                              | No. | 123,581   | 121,741   | 120,901   | 800     | 17,258  | 113,663   | 8,021   | 97,150    | 11,837  |
|                                   | %   | (100.0)   | (98.5)    | (97.8)    | (0.6)   | (14.0)  | (92.0)    | (6.5)   | (78.6)    | (9.6)   |
| Total, Ontario . . . . . 1951     | No. | 1,181,125 | 973,060   | 728,670   | 236,150 | n.a.    | n.a.      | n.a.    | 640,135   | n.a.    |
|                                   | %   | (100.0)   | (82.4)    | (61.7)    | (20.0)  | —       | —         | —       | (54.2)    | —       |
| 1961                              | No. | 1,640,750 | 1,598,498 | 1,588,075 | 9,598   | 221,859 | 1,456,624 | 106,141 | 1,246,882 | 161,307 |
|                                   | %   | (100.0)   | (97.4)    | (96.8)    | (0.6)   | (13.5)  | (88.8)    | (6.5)   | (76.0)    | (9.8)   |
| Region as % of Ontario . . . 1951 | %   | 8.5       | 9.4       | 8.8       | 11.4    | —       | —         | —       | 9.3       | —       |
|                                   | %   | 7.5       | 7.6       | 7.6       | 8.3     | 7.8     | 7.8       | 7.6     | 7.8       | 7.3     |

(1) Includes other miscellaneous types of refrigeration facilities.  
n.a. not available.

# Notes



# Notes

# Notes

# Notes









# LAKE ST. CLAIR REGION

## Population

- Over 7000    1000 – 2000    •  
 2000 – 7000    ■    Under 1000    •

Windsor – 192,185  
 Sarnia – 54,097  
 Chatham – 32,098  
 Leamington – 9,529  
 Wallaceburg – 10,657

- Township Boundaries  
 — Railways  
 — Main Highways  
     4 Lane  
     2 Lane  
 \* Air Bases  
 ▲ Provincial Parks

